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ABSTRACT

In an effort to determine the methods used to assess and document student achievement at two-year colleges within the Mid-Plains Technical Community College Area (MPTCCA) in Nebraska and to develop an effective assessment model for use within the MPTCCA, surveys were sent to 79 chief executive officers representing all public, two-year, technical community colleges in Nebraska and the surrounding states. A total of 64 usable surveys were returned for an 81% response rate. In addition to the survey, interviews were conducted with assessment personnel at MPTCCA member institutions, and available MPTCCA data records were examined. Findings from the questionnaire included the following: (1) 37.5% of the responding institutions indicated that they had an organized, ongoing system to assess student academic achievement; (2) approximately one-half of the assessment plans in use were directly related to the institution's mission statement; (3) student achievement was most frequently assessed in academic transfer and vocational/technical programs; (4) 54.7% of institutions reported using the Assessment of Student Skills for Entry Transfer (ASSET) test; (5) student critique of instruction was used most frequently for pre-graduation assessment, while job-placement studies were the most common approach to post-graduation assessment; and (6) assessment findings were used about equally by institutions for revising curricula, facilitating strategic planning, and meeting accountability mandates. Interviews revealed limited assessment activities within the MPTCCA. A literature review, the survey instrument, interview questions, and a copy of the assessment model are included. (JMC)

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# AN INVESTIGATION OF ASSESSMENT AND DOCUMENTATION OF STUDENT ACADEMIC ACHIEVEMENT IN COMMUNITY COLLEGES AND A PROPOSED MODEL

by

Ford M. Craig

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A Major Applied Research Project presented in
partial fulfillment of the requirements
for the degree of Doctor of Education

Nova University

July 1991

JC 910 368

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Abstract of a Major Applied Research Project Presented
to Nova University in Partial Fulfillment of the
Requirements for the Degree
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The purpose of this study was to conduct an in-depth investigation of the current state of assessment and documentation of student achievement in community colleges which led to the development of an assessment model for the colleges of the Mid-Plains Technical Community College Area (MPTCCA). The problem which prompted this study was that the colleges of MPTCCA did not have an organized, comprehensive, ongoing system of documenting student achievement. Such a plan was a new North Central Association Commission on Institutions of Higher Education requirement for post-secondary institutions. Thus, the research questions involved what kinds of assessment models existed, what types of data were available within the MPTCCA colleges, and what type of model was the most appropriate for the MPTCCA institutions.

Several procedures were involved in completing this case study. An extensive review of literature was conducted to gather data on assessment of student academic achievement. A questionnaire was validated and mailed to chief executive officers of all public, two-year, technical community colleges in Nebraska and the surrounding states. The purpose of the questionnaire was to determine the current state of assessment and documentation practices in the region. Interview methodology was used to determine availability of useful data within MPTCCA institutions. Available relevant local records were examined and referenced.

Findings of the questionnaire procedures, based on an 81 percent response rate, were used to derive these conclusions: (1) a number of models to assess student academic achievement have been developed; (2) these models had a number of common characteristics; (3) fewer than half of the institutions surveyed had organized, ongoing systems designed to assess student academic achievement; (4) approximately one-third of the institutions surveyed had organized systems to assess student academic achievement; (5) approximately one-half of the assessment plans that had been developed were directly related to the institution's role and mission statement; (6) academic transfer programs and technical-vocational programs were most likely to be assessed; (7) community services programming was not receiving as much assessment attention; (8) the ASSET test was most often used to assess entering students; (9) a student critique of instruction was most often used to assess students prior to graduation; (10) job-placement studies were most frequently used as devices of student follow-up after graduation; (11) assessment findings were used about equally for revising curricula, facilitating strategic planning, and assurance of accountability to various publics; and (12) the dean of instruction or academic dean was most likely to provide leadership for assessment activities.

Findings based on the interviews and records procedures were used to derive these conclusions: (1) limited kinds of assessment activities were taking place within MPTCCA, in particular, placement testing and some follow-up; and (2) a limited number of records and record-keeping devices were uncovered.

Recommendations used to develop the model were as follows: (1) the model needed to be developed in relation to key areas of MPTCCA's role and mission statement; (2) both administrative personnel and faculty members needed to be involved in implementation of the model; (3) the model was to be based on a conceptual framework; (4) the model needed to provide for assessment of students prior to, during, and after their matriculation; (5) multiple measures of assessment were to be utilized; (6) existing assessment measures, devices, and procedures were to be incorporated whenever possible; (7) a feedback loop was to be included in the model; (8) student access and equity were not to be restricted by assessment procedures; and (9) the model was to contain provisions for reviewing the effectiveness of the assessment process.

The final product was the development of a proposed assessment model for MPTCCA institutions. Additional recommendations and time lines for implementation of the proposed model were developed.

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## Chapter 1

# INTRODUCTION

### Statement of Problem

The need for this study was generated, in part, by recent North Central Accreditation Association (NCA) action. On October 27, 1989, the Commission on Institutions of Higher Education (CIHE) of NCA approved a "Commission Statement on Assessment and Student Academic Achievement." A portion of the "Statement" (Thrash, 1990:387) follows:

> The Commission wants to make clear that all institutions are expected to assess the achievement of their students. With this statement we make explicit the Commission's position that student achievement is a critical component in assessing overall institutional effectiveness. Our expectation is that an institution has and is able to describe a program by which it documents student academic achievement.

Thus, while the commission has long emphasized the documentation of institutional effectiveness through its Criterion Three, these new guidelines established by CIHE represent a special focus and heightened responsibility for post-secondary institutions to measure and assess student outcomes.

At the time of this study, a major problem was that colleges of the Mid-Plains Technical Community College Area (MPTCCA) did not have an organized, comprehensive, ongoing system of documenting student achievement. NCA officials indicated that institutions undergoing an on-site visitation in 1991 were to be involved in serious planning efforts, the result of which would be a system of documenting student achievement. Institutions to be evaluated in 1992 were to have the plan in place and functioning. Since a team of NCA consultant-evaluators planned to visit the colleges of the MPTCC Area in October of 1991, this study, which involved the development of an assessment model, was of considerable importance to institutions of the MPTCCA.

## Background and Significance

As indicated, NCA is the regional accrediting association of consequence for the colleges of MPTCCA. Colleges within the Area include McCook Community College (MCC) located in McCook, Nebraska, and Mid-Plains Community College (MPCC) located in North Platte, Nebraska. Mid-Plains Community College has two campus locations, MPCC - Vocational Technical Division and MPCC - McDonald-Belton Campus. MPTCCA colleges first received NCA accreditation as an Area unit in 1986.

NCA's emphasis on assessment is part of a much larger movement. "Assessment" is a concept, and at times a practice of increasing importance in the realm of post-secondary education. Bray and Belcher (1987:1) note the interest shown by a broad range of individuals and groups:

> Assessment is a potent tool in shaping directions for higher education. Legislators are interested in it. Administrators are mystified by it. Practitioners are challenged by it. What to do, how to do it, and why it should be done are being asked on many levels.

It is important to consider why legislators, practitioners, administrators, and accrediting agencies view assessment as being significant and therefore desirable. Stated another way, what difference will it make if the institutions of MPTCCA adopt and implement an assessment program? Why is assessment deemed significant by NCA and other regional associations?

Assessing student academic achievement is significant to institutions like those of the MPTCCA for several reasons. First, adoption of assessment procedures is of importance to students. Losak (1987:26) makes this clear when he states,

> In summary, standardized testing for entry-level course placement decisions and exit examinations can be effective in assuring that certain basic concepts have been learned and that students who need remedial efforts receive the remedial courses.

In his comments, Losak details two areas of potential benefit for students: (1) assessment activities designed to aid proper initial placement of students in classes; and (2) assessment activities crafted to insure attainment of certain basic concepts and skills. Rounds, Kanter, and Blumin (1987:90) also note the significance of student assessment activities:

> One impact of the growing emphasis on assessment and information collection has been a movement toward providing students with increasingly complete information, a sort of consumer awareness movement that is a far remove from the days when students' results were a carefully guarded secret held close to the chest by counselors while they gave students the benefit of their professional analysis.

In short, these writers suggest that assessment can provide students with information necessary for good decision making. Having the necessary information, students can then more accurately decide about individual classes as well as programs and entire courses of study.

Assessment practices can also have a positive influence on instructional and curricular practices. This concept is supported by Rounds, Kanter, and Blumin (1987:84):

> Regular measurement of learning outcomes will identify efficient learning modes for individual students and have an impact both on curriculum and on instructional delivery.

What these writers suggest is that assessment results, properly organized and interpreted, can be used to make adjustments to curricular offerings and instructional practices. This notion receives further support from Hammonds, Hochstein, and Hulse (1990:66):

> An assessment program should have as its primary purpose the improvement of education at an institution. This must be remembered, so that one does not become so bogged down in data collection that the ultimate goal of quality education is forgotten.

In this passage, Hammonds and others assert the reason for assessment practices should be the improvement of education, a rationale consistent with NCA's heightened emphasis on assessment. However, they do add a cautionary note in that assessment should be viewed as a means and not an end in and of itself. Thus, an institution's curriculum planning and instructional processes can be improved through an effective assessment program.

Yet another reason why assessment is of special significance is its function as one type of institutional affirmation to external "publics" that learning is, indeed, occurring. Bray and Belcher (1987:3) conclude that supporters of assessment "began from the premise that colleges must restore public confidence in their quality and effectiveness." Williams (1990:33) also contends that there is some doubt about the effectiveness of colleges:

> Colleges have always tested students. What is new is doubt--doubt about the validity and reliability of past methods as they are applied in today's academic context.

Assessment data thus can be viewed as one kind of response to those who would challenge by saying, "show me, and be able to prove it."

A final and very significant reason why MPTCCA institutions need to implement an assessment program is to maintain NCA accreditation. It is well known that accreditation by the appropriate regional association facilitates the transfer of academic credits between colleges and universities. Regional accreditation is also necessary for students to receive certain types of federal financial aid. Finally, students cannot run for a national office in organizations such as Phi Theta Kappa unless the MPTCCA institutions are properly accredited by one of the regional agencies, in this case - NCA.

In summary, the need to begin assessing student academic achievement in a systematic manner is of essence for MPTCCA institutions. Reasons in support of assessment include the following:

1. It is intended to benefit the students.

2. It should improve curricular and instructional practices.
3. It can provide one type of evidence regarding student outcomes.
4. It is a necessary practice in order to maintain regional accreditation.

## Research Questions

The purpose of this Major Applied Research Project (MARP) was to (1) conduct an in-depth investigation of the current state of assessment and documentation of student achievement in public, NCA accredited, technical-community colleges in Nebraska and bordering states; (2) design an assessment model; and (3) suggest an implementation plan for the colleges of the Mid-Plains Technical Community College Area so that the process of assessment could begin and resultant educational benefits might be accrued. This study followed the case study format.

To facilitate this case study, four basic research questions were examined:

1. What kinds of effective assessment models are currently being used?
2. What is the present status of formalized assessment of student academic achievement in NCA accredited, public, two-year, technical community colleges in Nebraska, Kansas, Colorado, Wyoming, South Dakota, Iowa, and Missouri?

3. What assessment procedures, processes, and data already exist within the MPTCCA?
4. What type of model would be most appropriate for the colleges of the MPTCCA?

## Definition of Terms

The term assessment "is the process of defining, selecting, designing, collecting, analyzing, interpreting, and using information to increase students' learning and development (Erwin, 1991:15). For this study, Erwin's definition will serve as a major reference point.

The term capstone, as used in this study, means any major, comprehensive project, test, or written composition which is used as a terminal form of evaluation. For example, a MARP is a "capstone" device for the Nova Ed. D. program.

## Assumptions

There are several assumptions made in conjunction with this research effort. First, it was assumed that headings and sub-headings on the mailed questionnaire were reasonably clear and understandable to respondents. Second, it was assumed that institutions surveyed were comparable enough to make data gathered from the questionnaire meaningful. Third, it was assumed that at least some assessment activities / programs / models existed in a reasonable number of the institutions surveyed. It was also assumed that the instrument used for the personal interviews of MPTCCA personnel was both a reliable and valid data gathering tool. A final assumption was that some data relevant for usage in the proposed model could be uncovered within the colleges of the MPTCCA.

## Limitations

There were a number of limitations inherent in this study. First, conclusions, recommendations, and the model developed as a result of this study were not intended to be generalized for application at other two-year colleges. Second, the utility of the mailed questionnaire data was, in some cases, limited because institutions surveyed differed significantly in size from those of the MPTCCA. Also, several of the institutions surveyed were in the very early stages of developing assessment plans and therefore could provide only limited kinds of responses. A fourth limitation was that there were only a minimal number of relevant records within the MPTCCA colleges.

## Chapter 2

## REVIEW OF THE LITERATURE

> In less than five years, assessment has traveled from being an item in a reform report to a condition of doing business. The Education Commission of the States reports that more than three-quarters of all states have a student assessment effort planned or in place (Edgerton, 1990:4).

In this passage, Edgerton notes the rapid development and proliferation of the assessment movement in a substantial number of states. Another writer who confirms the strength of the movement is Marchese (1990:371):

> Last spring, eighty-two percent of all institutions - public and private, four-year and two-year reported on an American Council on Education survey that they had assessment activities underway.

The figure cited by Edgerton (1990) in the first passage "more than three-quarters of all states" and the percentage figure "eighty-two percent of all institutions" are indicative of the prevalence of assessment. It thus can be seen why Hutchings and Marchese (1990:16) conclude as follows:

> As late as 1987 one could still hear assessment called a fad; but no more. To many observers--certainly to us--assessment's questions seem sure to be with us in a big way for a long time.

As Hutchings and Marchese (1990:16) indicate, it appears that assessment "will be with us in a big way for a long time."

If an understanding of assessment is to be gained, there are several helpful questions to consider. What are the origins of the assessment movement? How do the regional accreditation associations relate to it? Are state governments supporters of assessment? What is assessment of student outcomes and what are characteristics of good assessment plans? What would an effective assessment model look like? The topics which are the focus of these questions will be examined, and at least some answers will be offered through this review of recent literature.

This chapter contains five sections that are intended to clarify the nature of assessment. The first section will present a brief historical overview of the assessment movement. The second will be devoted to the recent emphasis on assessment in several of the regional accreditation associations/commissions. The third will be concerned with the current emphasis on assessment (or lack of it) in Nebraska and states which border it, and the fourth will include characteristics needed in an effective institution-wide model designed to assess student academic achievement. The fifth will involve presentation and description of several models that have been developed.

## Historical Overview

In a recent article appearing in Change, Hutchings and Marchese (1990) provide historical insight regarding the place of assessment activities in nineteenth-century American colleges. These authors (1990:14-15) remind readers that "in the 19th-century American college it was assumed that the mere taking of courses was insufficient warranty for a degree." After completing the coursework, a candidate for a bachelor's degree had to face a "final hurdle of a senior declamation, a requirement that he or she publicly demonstrate a full possession of knowledge and high skills of intellect and speech" (Hutchings and Marchese, 1990:15). These same authors note that such declamations were often oral and were conducted "by and before outsiders, sometimes clergy, at Amherst by 'Literary Gentlemen of Good Standing'" (Hutchings and Marchese, 1990:15). It is further noted that this practice of senior declamations was carried over from English universities with the notion that "instruction and evaluation ought properly to be distinguished and be done by different parties" (Hutchings and Marchese, 1990:15).

Hutchings and Marchese (1990) suggest that at least four changes near the end of the nineteenth century caused a shift away from assessment practices like the senior declamation. The changes highlighted by these authors (1990:15) are (1) the advent of the elective system with expanded numbers of subjects for study; (2) the fact of great increases in the number of students attending college; (3) the view that the college professor was to be a subject matter specialist; and (4) the notion that learning was the student's responsibility. Hutchings and Marchese (1990:15) next indicate that eliminating the senior declamation process caused considerable discussion about the basis upon which a degree should be awarded; however, a solution was devised:

> In the 1880's, a bit of administrative invention filled the breach: instruction and evaluation (grading) were combined within individual courses, each course was assigned a credit-hour value, and when the credits (C average or better) totaled 120 the degree would be issued.

These writers (1990:15) close by commenting that many decades have passed since seniors received a comprehensive examination, and with the loss of that tradition, "a tradition of asking questions about our graduate's competence" was lost as well.

Not until the decade of the early 1970's did formalized assessment procedures in certain institutions of higher education begin to receive attention. This is confirmed when Edgerton (1990) indicates that the seeds of the present assessment movement can be traced back to the decade of the early 1970's. Edgerton (1990:4) notes two especially influential figures from that time period:

> Fortunately, way back in the early 1970's, presidents like Sister Joel Read of Alverno College and Charles McClain of Northeast Missouri State saw in assessment a powerful tool to improve student learning.

Erwin (1991:20-21) also mentions Alverno College and Northeast Missouri State and adds a third, the University of Tennessee at Knoxville. That assessment was viewed by the presidents of these institutions as a "powerful tool" to facilitate student learning is a tribute to their insight regarding the value of the process.

It is not altogether surprising that many proponents of educational reform during the 1980's would view assessment as an appropriate response to doubts about the efficacy of college and university education. Resnick (1987:9) suggests that the decade of the 1980's was a decade involving close scrutiny of educational institutions: '

> The nation is still emerging from an intense period of criticism of its secondary institutions that produced more than a dozen commission reports and an indictment of a 'rising tide of mediocrity.' The public recognizes that the products of these secondary schools are entering higher education. How good are the institutions that receive these graduates?

The question upon which Resnick ends is one that is very much a part of public consciousness.

Many of the commission reports of the 1980's were critical of the secondary schools, but public confidence in institutions of higher education also began to deteriorate. It is not surprising when Resnick (1987:10) comments that "our colleges and universities must act to restore public confidence." Hutchings and Marchese (1990:16) provide one very strong reason why assessment measures in post-secondary institutions began to be viewed favorably by public officials: "many governors (and legislators) turned to assessment because it was a 'solution' they recognized from the K-12 level." Thus, those in charge of public policy viewed assessment as one way of demonstrating student outcomes and therefore providing a measure of accountability for tax dollars expended.

In this climate so conducive to assessment practices, Erwin (1991:22) lists a second generation of colleges and universities which began to develop assessment plans:

> These institutions included King's College in Pennsylvania, Kean College of New Jersey, James Madison

> University in Virginia, Miami-Dade Community College, Mt. Hood Community College, South Dakota State University, Ball State University, Ohio University, Rhode Island College, Clayton State College in Georgia, and the State University of New York College at Plattsburgh.

Erwin (1991:22) comments that many of these institutions initiated their efforts in the mid-1980's.

This short historical sketch of assessment practices reflects at least four periods of time: (1) the early to mid-nineteenth century college setting where the "senior declamation" prevailed as an assessment procedure; (2) the late nineteenth and early twentieth century when changes such as the advent of the elective system and increases in student numbers caused a shift away from the "senior declamation"; (3) the early 1970's when a few institutions pioneered assessment efforts; and (4) the last half of the decade of the 1980's when assessment procedures and efforts once again gained much favor in post-secondary education.

A thoughtful reader might conclude that the four aforementioned periods suggest a cycle and that assessment might soon go the way of other trends. However, Erwin (1991:6) believes otherwise: "The intense attention to assessment may not last; however, its effects will last because of the permanency of the actions being taken now." A number of these actions will receive comment in the next section.

## Regional Accreditation Associations and Assessment

The literature of the several regional accreditation associations in recent years contains an increasing number of passages urging, and in some cases mandating, that colleges and universities begin formalized assessment procedures. However, Baker and Roberts (1989:48) believe that the accrediting agencies are mindful of individual differences and diversities among institutions of higher learning:

> Each of the six regional accrediting agencies of American postsecondary education today hold to the premise that diverse individual institutions should be encouraged to develop according to their own goals and resources.

This premise that diversity and individuality of colleges and universities is to be permitted and nurtured impacts upon how the accreditation agencies view assessment. Ewell (1987:26) conveys this point:

> Although less visible than state sponsored assessment efforts, regional accreditors have taken a similar tack. . . . Like the newer state programs, the choice is left to each institution.

Thus, the general position of the accreditation agencies is one of strong support for the assessment process; however, much latitude is allowed as to how the institution goes about the process. Marchese (1990:372) views this flexibility permitted to individual institutions favorably because "the opportunities to try different approaches and learn from one another are certainly there."

Rogers (1990:397) indicates the Southern Association of Colleges and Schools by the middle of the 1980's took definitive action in support of assessment: "In December of 1984, with a show of overwhelming support, the College Delegate Assembly adopted this new comprehensive approach to accreditation." The third step of the new approach, that the institution must "develop and carry out procedures for evaluating the extent to which these (institutional) goals are being achieved" (Rogers, 1990:398) contains the wording necessary to promote assessment.

The subject of assessing student achievement receives attention from The New England Commission on Vocational Technical Career Institutions. Maloney (1990:381) comments on assessment emphases developed by this Commission:

> On June 24, 1986 (with additional revisions) the revised Standard and the Interpretive Guideline (both with Commission approval) were forwarded to all affiliated institutions with the stipulation that beginning in the fall of 1987 all institutions were to be in compliance. Further, documents that supported and verified the measurement of educational outcomes were to be available during future on-site accreditation reviews.

However, assessment guidelines are still being formulated by the New England Association on Institutions of Higher Education. In her recent survey to determine how the various accrediting associations were approaching the assessment issue, Thrash (1990:370) indicates that members of New England Association's Commission on Institutions of Higher Education were currently reviewing the relationship between the assessment movement and Commission standards.

From the neighboring Middle States Association of Colleges and Schools, Mayhew and Simmons (1990:376) report that a Task Force on assessment was created in 1988. Members of the Task Force developed a document for Middle States institutions which establishes a framework for assessing student outcomes. Mayhew and Simmons (1990:378) report that evaluation of the Task Force's impact is continuing:

> The Commission on Higher Education has enthusiastically endorsed the work of its Task Force on Outcomes Assessment and will begin an ongoing evaluation of the effect of its work with the institutions scheduled for evaluation beginning in the spring semester, 1991.

Thus, the Middle States Association is just beginning to evaluate the impact of the Task Force's efforts.

As noted earlier in this study, the North Central Association's (NCA) Commission on Institutions of Higher Education (CIHE) has long emphasized assessment and documentation of institutional effectiveness through its Criterion Three, "The institution is accomplishing its purposes." The "Commission Statement on Assessment and Student Academic Achievement" (see Appendix A) approved in October of 1989 emphasizes and requires assessment and evidence of student academic achievement.

Furthermore, in the NCA CIHE Assessment Workbook, (1991:31-32) specific timetables are listed with the expectation that institutions within NCA's sphere of influence will plan and then begin to initiate formal assessment procedures. For the 1991-92 evaluation cycle, it is noted in the Assessment Workbook (1991:31) that "all comprehensive evaluation teams will review the progress made by institutions in responding to the Commission's initiative." Additional guidance is provided to define NCA's assessment expectations for institutions being evaluated in the period from 1992 through 1995 and for institutions to be evaluated after 1995.

Wolf (1990:403) comments that the Western Accrediting Commission for Senior Colleges and Universities adopted a much revised set of accreditation standards in 1988 "calling on institutions to focus on assessment as a means to assure institutional and program quality and effectiveness." The position established by The Western Accrediting Commission for Community and Junior Colleges is nearly identical to that of the Commission for Senior Colleges and Universities:

> Each subsequent iteration of that standard (on educational programs) has been increasingly assertive, to the point where in the 1990 Handbook, Standard 1D states, 'The institution has developed the means for evaluating how well, and in what ways, it is accomplishing its purposes and uses the results of these evaluation as the basis for broad-based, continuous planning and improvement' (Peterson, 1990:401).

The terminology "how well, and in what ways" leaves little doubt that assessment is a priority for the Western Commission on Community and Junior Colleges.

The Accreditation Handbook (1988:47) of the sixth regional accrediting association, the Northwest Association of Schools and Colleges, contains assessment-related language under Standard V - Educational Programs:

> The education of students is the primary reason for the existence of academic institutions. Therefore, the assessment of the educational program is the most important endeavor in accreditation and must be conducted with rigor and sensitivity as well as an awareness of the diversity of mission and means.

As a result of her survey work, Thrash (1990:370) comments that, like the New England Association, the Northwest Association is currently reviewing its standards in the light of the assessment movement.

To summarize, four of the regional accreditation associations have strengthened their positions with regard to assessing student academic achievement: (1) the Southern Association of Colleges and Schools; (2) the Middle States Association of Colleges and Schools; (3) the North Central Association of Colleges and Schools; and (4) the Western Association of Colleges and Schools. The final two Associations, the New England (with the exception of the Commission on Vocational Technical Career Institutions) and the Northwest Association of Schools and Colleges are presently reviewing their standards as they relate to assessment of student outcomes.

## State Government Emphasis on Assessment In Nebraska and Its Bordering States

NCA Executive Director Patricia Thrash (1990) also surveyed state higher education agencies in the North Central region at the time she surveyed the five other regional accreditation associations. Included in those she surveyed were the states examined in this study: Nebraska, South Dakota, Wyoming, Colorado, Kansas, Missouri, and Iowa.

With regard to Nebraska, Thrash (1990:427) comments, "Nebraska reports that it currently has no requirements on assessment." However, Seacrest (1991:1) suggests that two forces are at work in Nebraska which are likely to cause change in the nature of academic program review and assessment:

> Constitutional program review authority of the Coordinating Commission for Postsecondary Education including the authority to approve and disapprove programs of Nebraska's public institutions.

> Inclusion of student performance assessment at colleges as part of the accreditation process of the North Central Association.

Of special importance, according to Seacrest (1991:2), is the fact that the new Coordinating Commission is now part of the Nebraska Constitution and has the authority (beginning in 1992) to "review, monitor, and approve or disapprove" the programs of each public postsecondary institution.

Like Nebraska, Iowa does not presently have assessment requirements. However, Thrash (1990:420) reports that the Iowa State Board of Education "is currently exploring several issues related to student outcomes and assessment in order to determine the best approach to address state needs."

State government officials in Wyoming and Kansas appear to be encouraging and supporting (but not mandating) assessment activities. Thrash (1990:432) provides the following information regarding assessment practices in Wyoming:

> W.S. 21-18-202 (a) (ii) requires the Commission to review existing community college districts. Reviews are usually conducted in conjunction with NCA visits. This practice has been in effect since 1985.
>
> Current requirements came about because of the need for the state to collect data on the viability and accountability of existing community college districts.

Of Kansas, Thrash (1990:421) reports that the "Kansas State Board of Education does not have a mandated program of assessment for the state's community college system." However, officials in Kansas emphasize that the State Board is "assisting the various community colleges in the development of student assessment" (Thrash, 1990:421).

More stringent assessment requirements are noted in Colorado, Missouri, and South Dakota. "The Colorado legislature mandated in 1985 that public higher education institutions start assessing their students' increase in knowledge, skills, and capacities from entrance to graduation" (Thrash, 1990:417). Likewise, officials on the Missouri Coordinating Board for Higher Education are placing special emphasis on assessment practices:

> All new degree program proposals from public institutions must include an evaluative component satisfactory to CBHE staff. Examples of components are placement rates (vocational fields especially), and program success in attracting and graduating adequately prepared students (Thrash, 1990:426).

Finally, it is reported that in "Fall 1984 the South Dakota Board of Regents began to implement its comprehensive statewide assessment program" (Thrash, 1990:429). Thrash (1990:429-430) further reports that a statewide assessment committee was formed to "assist with program implementation."

In the group of states under consideration, the position of higher education coordinating or regulatory agencies (at the state government level) on the topic of assessment is mixed. As of the time of this writing, Nebraska and Iowa do not have guidelines on assessment, however, action may be taken in the near future. Regulatory agencies in Wyoming and Kansas appear to be encouraging and supporting, but not mandating, assessment activities. In contrast, Colorado, Missouri, and South Dakota state agencies have mandated assessment practices.

## Characteristics of Effective Programs Designed to Assess Student Academic Achievement

It appears assessment is a movement that will continue to impact institutions of higher learning. For this reason, it is well to consider the qualities or characteristics of good assessment programs. Writers of recent literature do agree upon a number of characteristics frequently found in programs identified as effective.

In the NCA Assessment Workbook (1991:35), it is indicated that the assessment program must flow from the institution's mission. These same staff writers (1991:36) comment that central to the existence of an educational institution is the mission to educate students:

> From each institutions' specific formulation of this central aspect of its mission and purposes flows the assessment program that provides evidence of academic achievement and enables the institution to use the documentation to improve its education programs.

Folger and Harris (1989:84) support this concept when they suggest that "in designing any assessment, the first step is to determine the objectives, outcomes, and processes to be assessed and to identify a priority for each." Erwin (1991:24) also emphasizes the need for "clear, assessable educational goals and objectives." Jacobi, Astin and Ayala (1987:25) make the point very directly:

> Any college that has not thought carefully about the operational definitions of its high-priority outcomes is not ready to select and administer standardized assessments.

In one way or another, these writers speak emphatically about the need for clear direction regarding a given institution's purposes of education. Frequently, such purposes are contained within or flow from mission.

Writers from at least two sources suggest that careful planning of the assessment program is vital. Folger and Harris (1989:87) emphasize that a good assessment program will take time to plan and implement:

> It will take several years to implement an assessment process; one mistake is to get started before the whole process has been planned. An assessment process represents an ongoing investment in improved processes and outcomes.

NCA Assessment Workbook writers (1991:36) contend that an assessment program should have a conceptual framework. They suggest that the "framework reinforces the importance of relating curriculum design, teaching, learning, and assessment" (Assessment Workbook, 1991:36). While their terminology is somewhat different from that of Folger and Harris, the focus is very similar. It takes planning to produce an effective conceptual framework.

A third desirable characteristic for an assessment program is strong faculty involvement. Several writers place heavy emphasis on this point; the first one is Hawk (1987:15): "Faculty should be fully involved in the designing, implementing and using the results of the assessment process." Erwin (1991:26) concurs saying that "the support of faculty is vital to an administration that wants to institute a successful assessment program." Also, Erwin (1991:26) advises that some skepticism from faculty members is to be expected and that "faculty and staff reactions should be anticipated and taken into account in the early promotion of an assessment effort." Finally, Folger and Harris (1989:88) note,

> Keep the assessment process close to the part of the organization that will use the assessment results. If instructional improvement is the goal, faculty and students must be involved.

Other writers could be cited; however, the basic premise would remain the same. The writers reviewed are highly supportive of faculty involvement in planning and implementing the assessment process.

The use of multiple measures (more than one type of assessment instrument) is a fourth area frequently mentioned as being vital to a quality assessment program. Erwin (1991:25) supports this concept as do Folger and Harris (1989:88) in their writing: "Good assessment almost always requires multiple measures, combined with expert judgment. Do not rely on a simple test or on one expert opinion." Additional support comes from Jacobi, Astin, and Ayala (1987:34) who suggest that "empirically, multiple measures provide an opportunity to determine the stability of key outcomes when assessed with different instruments." These same authors (1987:34) also maintain that multiple measures that produce results supporting the same conclusion are more likely to "reduce skepticism." Finally, the point is articulated in NCA's Assessment Workbook (1991:37):

> No one instrument is rich enough to capture the range of student achievement necessary for the institution to

> make a judgment regarding how well it is fulfilling its purposes in this area.

These writers do, indeed, voice strong support for the use of multiple assessment measures.

Before leaving the topic of "multiple measures," it is useful to define what, exactly, some of the measures are. Clagget (1989:4) mentions the following measures in his writing: (1) certification/licensure examination performance; (2) surveys coordinated by state governments; (3) transfer performance reports from senior (receiving) institutions; (4) program evaluations conducted by colleges; and (5) any available institutional research studies. In his writing, Palmer (1988:12) emphasizes the need to assess the degree to which students are or are not meeting their educational objectives. Palmer (1988:15) also mentions that in vocational areas two outcome measures are frequently used: (1) the percentage of graduates who find employment in the field for which they were trained; and (2) the amount of additional money, over the course of a lifetime, a student can expect to earn as a result of his/her vocational training.

Other common assessment measures include a variety of tests. Ewell (1987:26) indicates that Xavier University of Louisiana "uses the Pre-Professional Skills Test (PPST) as a 'rising junior' examination." In their work, Rounds, Kanter, and Blumin (1987:85) highlight Educational Testing Service's (ETS) Computerized Placement Test which contains three modules which assess written communication, learning skills, and mathematics. These same writers (1987:90) also note that

"ASSET, ACT's program for community colleges, incorporates a comprehensive orientation, testing and research package." In still another variation on testing, Morante (1987:57) contends, "The development of basic skills placement tests by local faculty is widespread. The resulting tests are generally referred to as in-house tests." Finally, Losak (1987:26-27) cites the use of The College-Level Academic Skills Test (CLAST) which is required by the state of Florida for an associate in arts degree. This test

> consists of a series of tests designed to measure the communication and computation skills that community college and state university faculty members expect students who complete the sophomore year in college to possess (Losak, 1987:27).

Thus, professionals charged with assessment appear to be using a wide range of testing devices.

To return to desirable characteristics of an assessment program, a fifth quality is that assessment should provide data useful as feedback to students and to the institution. NCA Assessment Workbook writers (1991:37) argue

> since not all assessments are constructed to provide feedback to students on the quality of their performance and how they might improve, care must be taken to ensure that among the multiple measures used some provide this necessary feedback to students.

A locally created math placement test would qualify as one type of measure which would provide feedback to the individual student. With regard to assessment data as they impact upon the institutional practices, Williams (1990:41) offers this thought:

> The aim of assessment is not to improve institutional research; it is to improve teaching and learning by

> informing the faculty of the curriculum's strengths and weaknesses in attaining its major objective: the intellectual development of students.

Folger and Harris (1989:81) extend this line of thought into another area, saying "assessment information helps management make better decisions." In summary, assessment practices should provide feedback so that students can improve their chances of success and so that institutions can function more effectively.

A sixth characteristic worthy of mention is that assessment procedures should not restrict the community college's long held goals of access and equity. NCA Assessment Workbook writers (1991:38) support this characteristic. In his study, Coleman (1988:18) states,

> The findings of this study provide evidence that the implementation of the CLAST test adversely affected the graduation rate of Black minority students in the Florida Public Community College System.

The advent of formal institutional assessment practices in higher education is recent enough that the literature does not contain repeated references like this passage by Coleman. However, the existence of the passage provides an indication why NCA writers offer the caveat which opened the paragraph.

Seventh, a worthy assessment program is to be cost effective. Both Assessment Workbook writers (1991:38) and Folger and Harris (1989:88) support this concept. With regard to costs, these same writers (1991:38) contend "the program must also be designed to obtain maximum information for expended costs in time and money."

An eighth characteristic, bearing some relation to the seventh, is that the assessment plan not be overly complicated. Williams (1990:38) maintains that "if a plan isn't simple and convincing, it will never make a permanent transition from theory to practice. No plan can ever be ideal for every college." Jacobi, Astin, and Ayala (1987:78) also advise that institutions "initiate any new outcomes assessment modestly with minimal disruption of institutional activities." The more complicated and confusing the plan, the more likely it is that it will remain just that, a plan.

The ninth and final necessary characteristic is that the assessment program itself have a provision for review and evaluation. "An evaluation process will determine whether the conceptual framework is sound and all components are appropriate to the institution's mission and purposes" (NCA Assessment Workbook, 1991:39). The point is that periodic review of the framework is necessary so that adjustments can be made and newer assessment methodologies can be incorporated into the process.

To summarize, the writers reviewed identify at least nine characteristics common to effective assessment programs. Therefore, effective programs designed to assess student academic achievement should (1) flow from the institution's mission; (2) be carefully planned and have a conceptual framework; (3) have strong faculty involvement; (4) employ multiple measures of assessment; (5) provide data that will engender student improvement and institutional improvement;

(6) not restrict student access and equity; (7) be cost effective; (8) not be overly complex; and (9) contain a plan for evaluation of the assessment process itself.

## Examples of Assessment Frameworks/Models

Several different models and/or conceptual frameworks appear in recent literature. The first one noted is one of the earlier systems developed under the guidance of Charles McClain, president of Northeast Missouri State University (NEMO) from 1970 to 1989 (Hutchings and Marchese, 1990:35). In a narrative about NEMO's assessment efforts, Hutchings and Marchese (1990:35) highlight three parts of the effort that have been operational since the mid-1970's:

> 1) a value added component, which seeks to measure student growth in general knowledge from the freshman through the sophomore year via tests from ACT; 2) a comparative component, which seeks to demonstrate student achievement in the major field by means of nationally standardized tests, or, where no such test exists, a locally developed exam; and 3) an attitudinal component, which seeks to determine student perceptions of their own growth and satisfaction with the university and its services.

In further commenting on the NEMO approach, the writers note that as the assessment program has evolved and developed, the University has gradually shifted from heavy reliance on testing to approaches such as attitude surveys and student portfolios. Nonetheless, it is important to note the use of multiple measures at NEMO.

The Southern Association of Colleges and Schools (1989:12) offer a matrix (See Figure 1) that establishes one set of conceptual relationships helpful for understanding the assessment process.

**MATRIX RELATING PLANNING AND EVALUATION STEPS TO MAJOR AREAS OF INSTITUTIONAL MISSION**

| | STEPS | | | | |
|---|---|---|---|---|---|
| | State Purpose | Define Goals/ Results | Describe Means of Evaluation | Assign Responsibility | Describe Use of Evaluation Results |
| **MISSION AREAS** | | | | | |
| **Educational Programs and Services** | | | | | |
| **Research Programs** | | | | | |
| **Public Service Programs** | | | | | |

Figure 1

Matrix Developed by Southern Association
of Colleges and Schools

In this matrix, the progression of relationships begins with a mission area such as "educational programs." Next, a determination must be made as to the direction of the educational programs - for example, academic transfer. Once this is accomplished, various goals at the program level and at the course level can be established. Then, a means of evaluation can be determined, and the person or persons responsible for expediting the evaluation can be named. Finally, a determination of how the evaluation results are to be used is made. A clear progression is highlighted in this matrix and the flow of ideas logically relates to effective assessment practices.

Mayhew and Simmons (1990:377) comment on another framework of more recent origin. This framework (see Figure 2) is the product of recent assessment discussions within the Middle States Association.

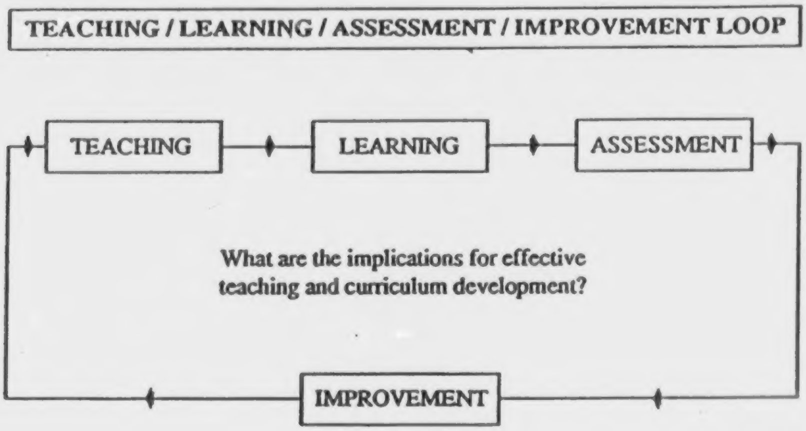
TEACHING / LEARNING / ASSESSMENT / IMPROVEMENT LOOP
TEACHING
LEARNING
ASSESSMENT
What are the implications for effective teaching and curriculum development?
IMPROVEMENT

Figure 2

Middle States Association
Framework

A careful reader will notice close similarities between the processes depicted in Figure 2 and the progressions suggested within the Southern Association of Colleges and Schools Matrix in Figure 1. Mayhew and Simmons (1990:377) comment on key progressions in the Framework:

> As illustrated above, outcomes assessment may be thought of as an attempt to connect statements of institutional mission, goals and objectives with outcomes of institutional programs and activities.

Again, the starting point of assessment is with institutional mission. From areas of mission come goals and then specific teaching objectives to expedite the learning process. To determine if learning has taken place, assessment is conducted. If the learning is not occurring as expected or not to the degree anticipated, there is room for improvement as is indicated by the feedback loop.

Hammonds, Hockstein, and Hulse (1990:68) include a graphic representation (See Figure 3 on page 33) of an Outcomes Assessment Model being used at Rankin Technical College. These authors (1990:63) note that the effort to develop the model "originated in the General Studies Department" but has since "spread throughout the institution." Again, a loop of the model concerned with "reformative action" receives special attention from the writers of the article. The Rankin model very clearly establishes the relationship between mission, institutional purposes, measuring instruments, and groups charged with the capacity to evaluate data gathered. Once the data is evaluated, a channel for reformative action is indicated.

Hammond, Hochstein, and Hulse (1990:66) also note that Rankin's assessment program requires that all degree seeking students (1) take either the ACT College Outcomes Measures Project (COMP) or the College Basic Academic Skills Exam (BASE) during an orientation prior to the start of a student's program; (2) participate in surveys during their program; (3) take an alternate form of each test they took upon entry; and (4) are surveyed as alumni one, five, and ten years after graduation. The authors (1990:66) conclude that Rankin's assessment program is "primarily longitudinal."

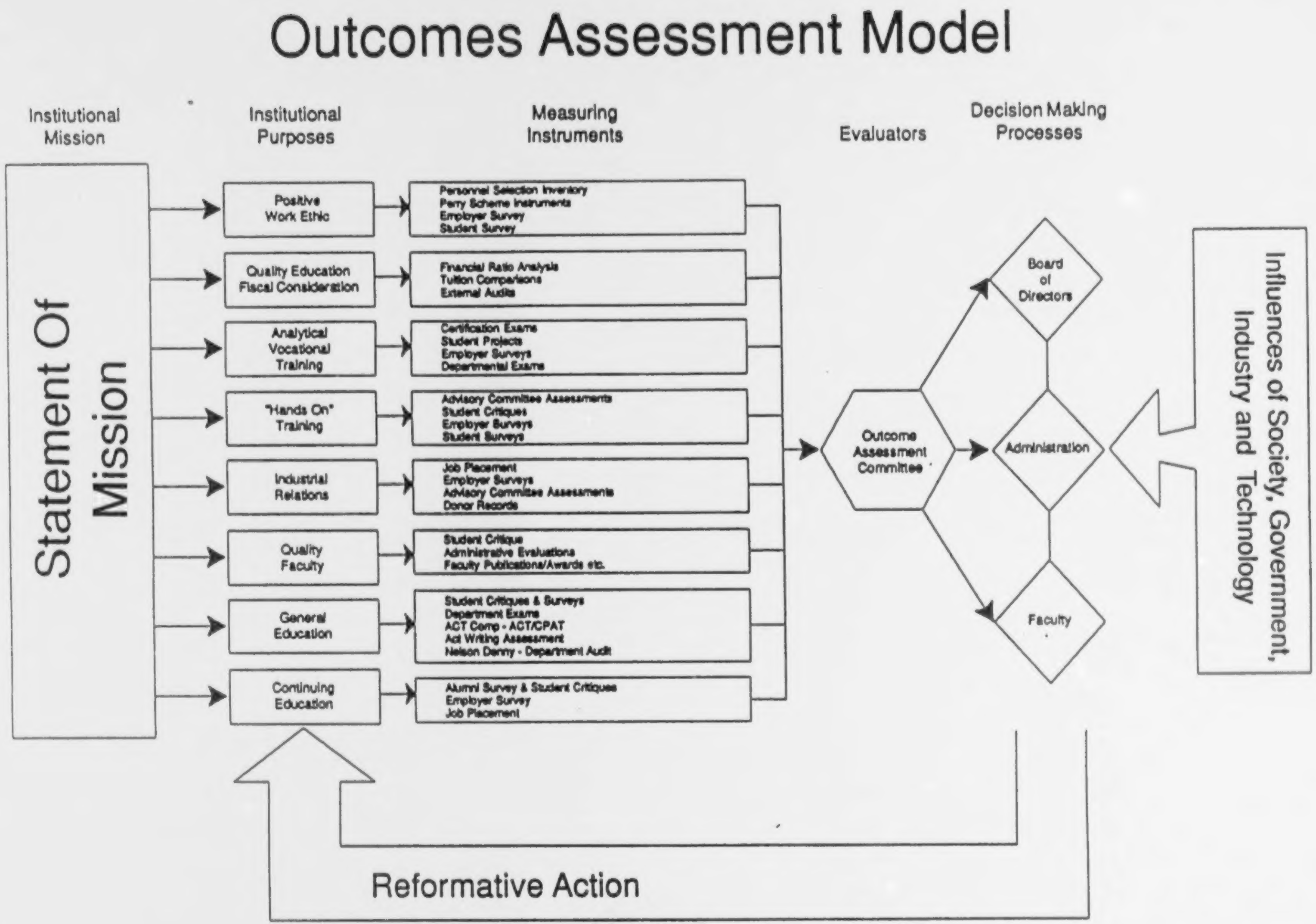

Figure 3
Outcomes Assessment Model at
Rankin Technical College

It should be noted that a number of assessment models were received as a result of the questionnaire that was mailed in conjunction with the present study. These models are summarized in Chapter 4.

## Summary of Literature Review

Several recent writers comment on the historical trends with regard to assessment. However, because of the legal mandates being established by states and the policy guidelines being established by the six regional accreditation associations, assessment is not likely to fade away. In responding to the call for effective assessment programs, several writers have established desirable characteristics needed in any worthwhile assessment plan. Finally, four models are presented in the literature review and several others are summarized in Chapter 4 of this study.

## Chapter 3

# METHODOLOGY AND PROCEDURES

Several techniques were employed in conducting this investigation of the current state of assessment and documentation of achievement in community colleges. The first section of this chapter contains relevant characteristics of case study methodology. Procedures used to complete the MARP appear in the second section, and they include the following: documentary procedures, questionnaire procedures, interview procedures, and records procedures.

## Case Study Methodology

Case study methodology was selected for the design of this MARP, since it seemed most likely to provide the range of information needed. Isaac and Michael (1981:48) offer the following purpose for a case or field study:

> To study intensively the background, current status, and environmental interactions of a given social unit: an individual, group, institution, or community.

Best and Kahn (1989:92) generally agree and add that

> the case study probes deeply and analyzes interactions between the factors that explain present status or that influence change or growth.

Best and Kahn also note that "typicalness, rather than uniqueness," is of consequence in a case study so that findings can be generalized at least to some degree (1989:92).

Thus, the topic of this study concerned the "current status" of assessment (including the use of frameworks and models) in a "social unit" (NCA accredited, public, two-year, technical-community colleges within a specified geographical region). The topic also involved the present status of assessment in MPTCCA (one member of the aforementioned institutional social unit) and how to effectively improve assessment practices based upon data gathered from a variety of sources.

According to Isaac and Michael (1981:48), several steps are important in conducting a case study:

1. State the objectives. What is the unit of study and what characteristics, relationships, and processes will direct the investigation?
2. Design the approach. How will the units be selected? What sources of data are available? What data collection methods will be used?
3. Collect the data.
4. Organize the information to form a coherent, well-integrated reconstruction of the unit of study.
5. Report the results and discuss their significance.

Isaac and Michael's step one, clarifying the objectives of the investigation, is contained in the "Research Questions" section of Chapter 1 of this document. Also in this same section, the unit of study was determined to be a specified sub-group of two-year postsecondary institutions and one member institution (MPTCCA) of that sub-group. How these institutions were conducting on-going, systematic assessment of student academic achievement was the characteristic or relationship that received scrutiny.

Step two, identified by Isaac and Michael (1981:48), concerns the matter of designing the approach, including how units are to be selected. In this case study, a sub-group of two-year postsecondary institutions was identified and selected because of certain inherent institutional characteristics. Therefore, it was determined that relevant information was most likely to be gleaned from institutions that were (1) two-year, technical-community colleges; (2) public institutions; (3) NCA accredited; and (4) in the same geographic region (Nebraska and bordering states). These characteristics were viewed as significant because they were descriptors of MPTCCA institutions, or stated another way, these were shared or "typical" characteristics.

The next question within Isaac and Michael's (1981:48) second step concerns the sources of data available. To provide the needed multiple sources of information for this case study, the following areas were identified: (1) documentary information; (2) information gleaned from questionnaire responses of institutions surveyed; (3) data gathered from interviews conducted within MPTCCA institutions; and (4) relevant records uncovered through the interview process. Thus, multiple sources of data were employed in order to maximize in-depth analysis and to improve reliability of findings resulting from the study.

The final question within Isaac and Michael's (1981:48) second step involves how the data is to be collected. In their writing, Best and Kahn (1989:92) note that data may be gathered through a variety of methods, and they list four techniques commonly used in case studies:

1. Observation by the researcher or his or her informants of physical characteristics, social qualities, or behavior
2. Interviews with the subject(s), relatives, friends, teachers, counselors, and others
3. Questionnaires, opinionnaires, psychological tests and inventories
4. Recorded data from newspapers, schools, courts, clinics, government agencies, or other sources.

As mentioned in the preceding paragraph, it was determined that at least four sources of data were available. Therefore, data were gathered by (1) collecting and reviewing documentary information; (2) developing and administering a questionnaire; (3) conducting interviews; and (4) examining available records. Thus, at least three of the four data gathering methods mentioned by Best and Kahn (1989:92) were utilized in this MARP.

Step three in Isaac and Michael's listing (1981:48) is to "collect the data." Precisely how the data was gathered is detailed in the remainder of this chapter. (It should be noted at this point that Isaac and Michael's fourth step, organizing the data in a coherent format, and fifth step, reporting and discussing significance of results, are accomplished in the last two chapters of this MARP.)

## Documentary Procedures

An extended search of the literature was conducted to provide a conceptual framework for the study. "Student assessment," "student outcomes," "regional accrediting associations," "community colleges," and "technical-community colleges were identifiers used to locate seventy-seven related pieces of literature in an ERIC (Educational Resources Information Center) computer search. A second ERIC search was conducted using "two year colleges," "community colleges," and "institutional research" as identifiers. This second search yielded one hundred journal articles, research reports, and reviews of literature. From the 177 total articles listed as a result of both ERIC searches, the number was narrowed by selecting for further examination (1) only those documents published since 1986; and (2) only those documents that dealt directly with assessment of student academic achievement in technical-community colleges.

The literature search was extended in a number of other ways. First, several books dealing with the topic of assessment were secured from the vice president of instruction at MPCC - McDonald Belton Campus. Second, books and articles were also secured at the Annual Meeting of the North Central Association in Chicago held March 17-19, 1991. Third, books and articles were gathered at a special "Assessing Student Academic Achievement" seminar conducted by NCA at Denver, Colorado on May 3, 1991. In addition, two recently published books on assessment were purchased by the MCC library and thus made available for use in this study. Fifth, materials related to assessment of student academic achievement were secured from the Commission on Colleges of the Southern

Association of Colleges and Schools, the Commission on Colleges of the Northwest Association of Schools and Colleges, and the Middle States Association of Colleges and Schools. Finally, it should be noted that several models designed to assess student academic achievement were returned along with the questionnaire mailed in conjunction with this study. A summary of the major features of these documents is contained in Chapter 4 of this MARP.

## Questionnaire Procedures

A transmittal letter and questionnaire were developed (see Appendices B and C) so that a survey could be conducted. Several MPTCCA administrators were consulted during the questionnaire development process to assure a valid and reliable tool. From MCC, administrators consulted included the president, dean of instruction, and dean of student services. From MPCC, the area president and vice president of instruction contributed to the development of the questionnaire. Also, the executive director of NCA's Commission on Institutions of Higher Education was consulted to improve the reliability of the questionnaire. After the tool was developed, the MPTCC area president, chief executive officer for the Area, and the executive director of NCA validated (see Appendices D and E) the questionnaire.

Chief executive officers (CEO's) of seventy-nine, NCA accredited, public, two-year, technical community colleges (see Appendix F) received the transmittal letter, the questionnaire, and a stamped return envelope. Names of CEO's and their institutions were recorded so that after two weeks, it was possible to mail a note of reminder to those not yet responding to the questionnaire. This procedure helped to insure a greater response rate so that maximum generalizations could be made.

Descriptive statistics were used for analysis of questionnaire data because this study was descriptive and not inferential. Results were reported through the use of narrative format, figures, and tables.

## Interview Procedures

Once a conceptual framework based upon sources external to the MPTCCA was developed, interview methodology was further employed to determine the availability of useful data within MPTCCA institutions. Appendix G contains a list of questions used for personal interviews with MPTCCA personnel. Personnel to be interviewed were identified by the MPTCCA president.

At the Mid-Plains Area Office, the adult basic education (ABE) director was interviewed on May 9, 1991. No other interviews were conducted with personnel employed at the Area Office.

Throughout the afternoon of May 13, 1991, three interviews were completed. The first interview was held with the dean of student services at MPCC - McDonald-Belton Campus. The second and third interviews involved the director of the assessment center and the director of placement and recruitment at the

MPCC - Vocational Technical Division site. It is to be noted that the interview with the director of placement and recruitment was an added procedure. This additional interview was completed because it was determined the director conducted and published follow-up studies for both MPCC campus locations in North Platte, Nebraska.

On May 14, 1991, two interviews were conducted; the interviews involved the dean of students from MPCC - Vocational Technical Division and the counselor from MPCC - McDonald-Belton. The interview process at the North Platte sites was, at this time, concluded.

MCC's president and dean of students were interviewed on May 16, 1991. With the completion of these interviews at MCC, all interviews for this study had been accomplished.

## Records Procedure

A limited number of record-gathering devices and/or records were uncovered as a result of the interview process. Record gathering devices were secured from (1) the director of ABE in the Mid-Plains Area Office; and (2) the dean of students at MCC. Records involving the results of a 1989-90 employment survey of MPCC graduates were provided by the director of placement and recruitment at MPCC - Vocational Technical division.

## Chapter 4

## PRESENTATION OF RESULTS

In order to design an effective assessment model with an appropriate implementation plan for MPTCCA, it was essential to present and analyze information collected in response to the four research questions. Information gathered from documentary sources and models returned with questionnaires was used to answer the first question which concerned the availability and use of effective assessment models. Information gleaned from the questionnaire was used to frame a response to the second question regarding the present status of formalized assessment in the sub-group of colleges examined in this study. The third question, which concerned the identification of assessment procedures already utilized within the MPTCCA, was answered through the use of information gained from interviews and derived from careful examination of available records. Question four was answered through the use of documentary sources, questionnaire data, interview information, and relevant records.

### Results from Documentary Sources

The literature was completed and organized into five sections: (1) an historical overview; (2) a review of the current position of regional accrediting association with regard to assessment; (3) a review of the current position on assessment of related state governmental bodies in Nebraska and contiguous states; (4) a review of characteristics that emerge in effective assessment programs/models; and (5) a presentation and description of several recent models designed to assess student academic achievement. In the fourth section of the literature review, nine characteristics common to many assessment plans/frameworks/models were identified.

The fifth section of the literature review contained several different conceptual frameworks and/or models including (1) an early system developed at Northeast Missouri State University (Hutchings and Marchese, 1990:35); (2) a matrix developed by the Commission on Colleges of the Southern Accrediting Association (1989:12); (3) a framework developed by the Middle States Association (Mayhew and Simmons, 1990:377); and (4) an outcomes assessment model at Rankin Technical College (Hammonds, Hockstein, and Hulse, 1990:68). Also in the fifth section it was noted that a number of assessment plans/frameworks/models were received from institutions surveyed as a result of this MARP. A summary of these plans or models follows.

The questionnaire (see Appendix C) mailed to the seventy-nine institutions identified for this study contained a request (see question two) for locally developed plans or models. Administrators from the following four Colorado community colleges returned "accountability" plans or reports: (1) Colorado Northwestern Community College, (1988:1-32); (2) Northeastern Junior College, (1988:1-12); (3) Community

College of Aurora, (1988:1-12); and (4) the Community College of Denver (1990:1-35). The plans ranged in length from twelve pages to forty-five pages and therefore can only be briefly summarized in this section.

The plans or reports received from the Colorado community colleges were structured around four common "goal areas" that related directly to the instructional mission of each college: (1) vocational/occupational education; (2) transfer/general education; (3) college developmental studies/education; and (4) community services/continuing education. It was noted that both faculty and administrators were involved in planning how to facilitate and measure the goals. Thus, each of the plans contained program-level objectives that were derived from the four aforementioned goal areas. Furthermore, the use of multiple assessment measures was evidenced, though the measures varied somewhat from institution to institution.

A number of other important features were noted in the Colorado plans. Each document contained the following: (1) narrative indicating feedback would be provided to the college's local community, board of trustees, administrators, faculty, and students; (2) language indicating assessment would be conducted in compliance with affirmative action guidelines; (3) an estimate of assessment plan implementation costs ranging from a low of $25,300 to a high of $115,725; (4) plans to collect student retention and completion data; and (5) language indicating that assessment results would be, in part, used to improve the assessment programs.

In addition to the four documents received from the Colorado community colleges, administrators from the following Kansas two-year institutions also returned assessment-related materials with their questionnaires: (1) Barton County Community College, (1989); (2) Labette Community College, (1991); (3) Johnson County Community College, (1990:1-16); and (4) Haskell Indian Junior College, (1990:1-27). Since more variation was noted among the materials received from the Kansas institutions, they are summarized separately in the succeeding paragraphs.

Materials received from Labette Community College (LCC) (1991) involved a brief handout (not paginated) that indicated guidelines for placement in mathematics courses. According to the writer of the handout, one assessment activity at LCC was the administration of American College Testing's ASSET (ASSET is a test name and not an acronym) Elementary Algebra Test to incoming students who had "completed an algebra course either in high school or college." If the incoming student had not completed an algebra course either in high school or college, then that student was to "take the ASSET Numerical Skills Test." Scores from both of these tests were then used to properly place students in one of LCC's several math courses.

Administrators at Barton County Community College (BCCC) provided a copy (not paginated) of their assessment program/model (1989). The BCCC Assessment Program (1989) contained two goal areas. The first area included the following student-related assessment goals: (1) assessing students' academic status upon entering and assisting them in selecting the best path for academic and career success; (2) assessing students' academic ability at specific institutionally determined intervals; and (3) determining a measure of correlation between student expectations and satisfaction levels upon attainment of their individual goals. The second area of the program included the following institution-related assessment goals: (1) collecting and disseminating data for long-term institutional planning; (2) examining institutional effectiveness; and (3) evaluating institutional goals while considering changing needs of students, faculty, and community. BCCC's assessment program was transformed into a visual model which is presented in Figure 4.

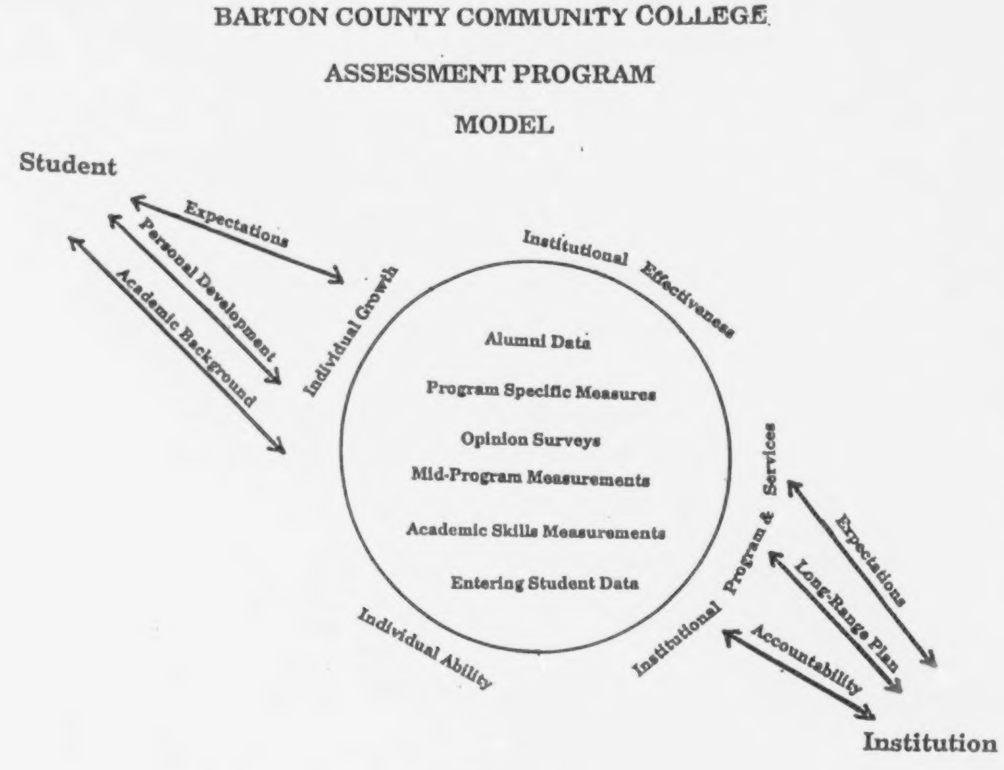

Figure 4

Barton County Community College
Assessment Program Model

Metzger, Coordinator of Planning and Evaluation at Haskell Indian Junior College, provided assessment materials (1990:1-27) which included a model. Metzger (1990:3) comments that the model is a combination of two other models, management by objective and input/process/output. In Metzger's model (1990:14), data are collected in several areas of academic achievement; (1) ACT scores; (2) high school GPA; (3) English placement test; (4) Math placement test; (5) Nelson-Denny instrument; (6) GPA at Haskell; (7) credit hours attempted, completed; (8) awards; and (9) academic status. Also, this model contains provisions for the collection of student persistence (Metzger, 1990:15). In the final sections of his document, Metzger (1990:25-26) highlights one aspect which needs strengthening; a consistent pretest/posttest measure needs to be added.

A final document which contained information about assessment of student outcomes was provided by Johnson County Community College (1990:6). This document, prepared by Seybert (1990:6), contains an institutional effectiveness model. Several components of the model (1990:6-7) involve measures commonly used to assess student academic achievement: (1) career student follow-up; (2) transfer student follow-up; (3) educational objective "leaver" surveys; (4) cognitive outcomes assessment, including ACT's ASSET (ASSET is a test name); (5) student evaluation of instructors; and (6) a grade/attrition report drop survey.

## Results from the Questionnaire

In addition to providing a portion of the answer to the first research question, the review of related literature also provided some of the information necessary for the creation of the questionnaire. Once created and refined, the questionnaire was mailed to CEO's of seventy-nine NCA accredited, public, two-year, technical community colleges. Of the seventy-nine administrators to receive the questionnaire, sixty-four CEO's or their designees returned the instrument which generated a response rate of 81 percent.

What follows is a description of how the seventy-nine administrators responded to various items on the instrument. The description is divided into two sections: (1) a section containing narration and figures that reflect administrators' responses to the first three, somewhat general questions; and (2) a narrative section containing six tables which depict administrator's responses to questions four through nine. Also, the administrator's written responses provided under the "Comments" section of the questionnaire are summarized as a part of the narrative.

The first general question asked was "Does your institution have an organized, on-going program to assess and document student academic achievement?" As depicted by the percentages contained in Figure 5, twenty-four administrators representing 37.5 percent of the total responded "Yes." The "No" response was marked by twelve administrators who represented 18.7 percent of the total. Of the sixty-four administrators who responded, twenty-six, representing 40.6 percent, checked "Is in early stages of being developed," and two, representing 3.1 percent, did not respond to this question. Respondents' additional narrative comments indicated that their institution's assessment program was "only in the second year," "not as organized as it will be," and "slowly being implemented."

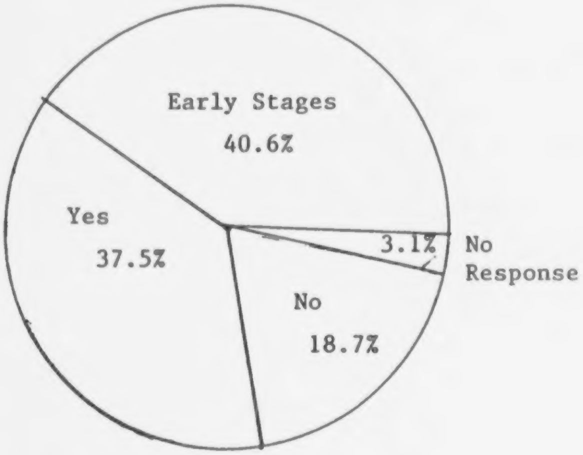

Figure 5

Distribution Reflecting Status
of Assessment Program
Development

Question two was as follows: "Does your institution follow an assessment plan/model?" As indicated by the percentages depicted in Figure 6, of the sixty-four administrators who responded, nineteen, representing 29.7 percent, marked "Yes," and thirty-eight, representing 59.4 percent, checked "No." Seven administrators, or 10.9 percent of the total, did not respond to this question. The "Comments" section of question two contained several related notations: (1) "task force developed the model"; (2) "using the ASSET test; (3) "ASSET"; (4) "commercial test, ACT-COMP"; (5) "do intake assessments only on a formal basis"; and "current model - too cumbersome." Finally, administrators from eight institutions provided copies of frameworks or models in response to a request made in question two. The models were summarized earlier in the "Results from Documentary Sources" section of this chapter.

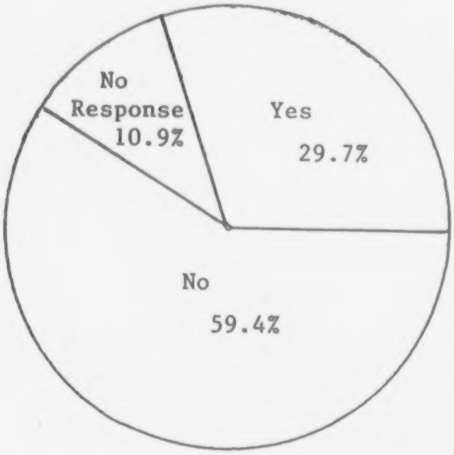

Figure 6

Distribution Reflecting Use
Of Assessment Plan
or Model

The third general question asked was as follows: "Is the assessment program ultimately guided by an institutional statement of role and mission?" As depicted in the percentages contained in Figure 7, thirty-four administrators, representing 53.2 percent of the total who responded, checked "Yes," and fifteen administrators, or 23.4 percent of the total, marked "No." The "Uncertain" option was marked by seven respondents which represented 10.9 percent of the total. Eight administrators, or 12.5 percent of the total, did not mark any of the options available. In the "Comments" section of question three, one administrator wrote, "It is guided more by compliance with the legislature and the State System of Community Colleges." Others wrote, (1) "hopefully, when it is developed"; (2) "state mandate"; and (3) "not directly connected."

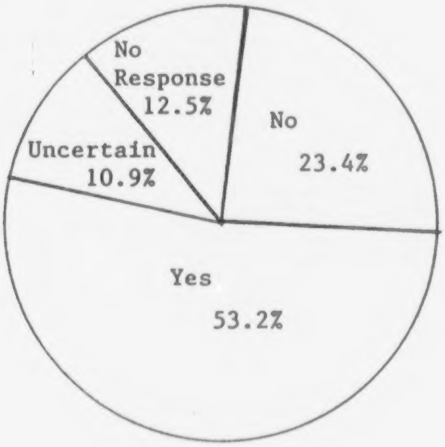

Figure 7

Distribution Reflecting Percentage of
Assessment Programs Connected
To Role and Mission

Question four was as follows: "What programs/courses are measured by the assessment procedures?" The following is a table which displays the results of respondents' answers to question four. In Table 1, there is a number and percentage of administrators who either responded to a category (example-Academic Transfer), did not respond to that category, or did not respond to any of the four categories. Each category in Table 1 appears in ranked order with the category receiving the greatest frequency of responses at the top, the one receiving the next greatest frequency underneath it and so on. The number of respondents in each horizontal series (responded, did not respond, did not respond to any) equals sixty-four and the percentage equals 100.

Table 1

Number and Percentage of Responses to Programs/Courses Measured by Assessment Options

| | | Responded to category | | Did not respond to category | | Did not respond to any category | |
|---|---|---|---|---|---|---|---|
| Rank | Topic | No. | % | No. | % | No. | % |
| 1 | Academic transfer | 40 | 62.5 | 9 | 14.1 | 15 | 23.4 |
| 1 | Vocational-technical | 40 | 62.5 | 9 | 14.1 | 15 | 23.4 |
| 3 | General education | 39 | 60.9 | 10 | 15.6 | 15 | 23.4 |
| 4 | Community service | 17 | 26.6 | 32 | 50.0 | 15 | 23.4 |

Of the sixty-four administrators who responded to the questionnaire, thirty-nine, or 60.9 percent, checked "General education"; ten representing 15.6 percent, did not respond to the "General education" section; and fifteen, representing 23.4 percent, did not respond at all to any options within this question. Option two, "Academic transfer" was checked by forty administrators, representing 62.5 percent of the total. Nine administrators, or 14.1 percent, did not respond to the "Academic transfer" section, and fifteen, representing 23.4 percent, did not respond to any options available in this question. Option three, "Vocational-technical" received exactly the same responses and percentages as option two. The fourth option was marked in the following manner:

1. Seventeen administrators, representing 26.6 percent checked the "Community services" option.
2. Thirty-two administrators, or 50 percent, did not respond to the "Community services" section.
3. Fifteen, representing 23.4 percent, failed to mark any of the four available options.

When these findings are arranged in rank order, the sequence is thus: (1) first place - the academic transfer and vocational-technical options; (2) third place - the general education option; and (3) fourth place - the community services option. In the "Comments" section of question four, written responses included the following: (1) "all college programs, services, and activities"; (2) "doesn't measure courses, measures student aptitude"; (3) "beginning stages, so too early to tell"; (4) "plus student services and college prep"; (5) "English Comp. I and College Algebra"; "external assessment such as scores on state nursing boards"; and (6) "competency-based programs already in place."

In Tables 2 through 6, there is a number and percentage of administrators who responded either "Yes," "No," or who simply chose not to respond in any way to the question. Each topic appears in ranked order with the topic receiving the greatest number of "Yes" responses appearing at the top of the table, the topic receiving the next highest number of "Yes" responses below it and so on. The number of respondents in each horizontal series (Yes, No, and No Response) equals sixty-four and the percentage equals 100.

Question five was as follows: "What measures/tests/ devices are being used to assess in-coming students (first time students)?" Administrators' responses (both numbers and percentages) to this question appear in Table 2. With regard to measures used to assess incoming students, the topics are ranked (based upon the computed percentage of "yes" responses) from first place through sixth: (1) ASSET - first rank at 54.7 percent; (2) locally developed tests - second rank at 42.2 percent; (3) entering student survey - third rank at 39.1 percent; (4) ACT-COMP - fourth rank at 31.2 percent; (5) College BASE - fifth rank at 20.3 percent; and (6) College Board's Multiple Assessment Programs (MAPS) - sixth rank at "0" percent.

In the "Other" (write in) blank of question five, administrators made the following notes: (1) "Nelson-Denny" (three times); (2) "TABE" (Test of Adult Basic Education, two times); (3) "CPT (College Board); (4) "ACT scores of high school students;" (5) "MMA Academic Profile;" and (6) "University of Wyoming math placement test." No additional notes were made in the "Comments" section of question five.

Table 2

Number and Percentage of Responses to Incoming Student Assessment Options

| Rank | Topic | Yes No. | Yes % | No No. | No % | No response No. | No response % |
|---|---|---|---|---|---|---|---|
| 1 | ASSET | 35 | 54.7 | 10 | 15.6 | 19 | 29.7 |
| 2 | Locally developed tests | 27 | 42.2 | 23 | 35.9 | 14 | 21.9 |
| 3 | Entering student survey | 25 | 39.1 | 21 | 32.8 | 18 | 28.1 |
| 4 | ACT-COMP | 20 | 31.2 | 28 | 43.8 | 16 | 25.0 |
| 5 | College BASE | 13 | 20.3 | 35 | 54.7 | 16 | 25.0 |
| 6 | MAPS | 0 | 0 | 35 | 54.7 | 29 | 45.3 |

The sixth question was as follows: "What measures/tests/devices are being used to assess students prior to graduation?" Responses to this question appear in Table 3.

Table 3

Number and Percentage of Responses to Assessment Prior to Graduation Options

| Rank | Topic | Yes | | No | | No Response | |
|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No | % |
| 1 | Student critique of instruction | 30 | 46.9 | 20 | 31.2 | 14 | 21.9 |
| 2 | Graduating student survey | 24 | 37.5 | 26 | 40.6 | 14 | 21.9 |
| 3 | Exiting student survey | 20 | 31.2 | 31 | 48.4 | 13 | 20.3 |
| 4 | ACT - COMP | 5 | 7.8 | 40 | 62.5 | 19 | 29.7 |
| 5 | Juries | 4 | 6.2 | 38 | 59.4 | 22 | 34.4 |
| 6 | College BASE | 3 | 4.7 | 40 | 62.5 | 21 | 32.8 |
| 7 | CLEP general exams | 1 | 1.5 | 41 | 64.1 | 22 | 34.4 |
| 7 | CLEP subject exams | 1 | 1.5 | 41 | 64.1 | 22 | 34.4 |
| 9 | PEP subject exams | 0 | 0 | 42 | 65.6 | 22 | 34.4 |

Topics relating to what measures/tests/devices were being used received the following "Yes" percentage responses and are accordingly ranked from first place through ninth: (1) student critique of instruction - first rank at 46.9 percent; (2) graduating student survey - second rank at 37.5 percent; (3) exiting student survey - third rank at 31.2 percent;

(4) ACT - COMP - fourth rank at 7.8 percent; (5) juries - fifth rank at 6.2 percent; (6) College BASE - sixth rank at 4.7 percent; (7) College-Level Examination Program (CLEP) General Exams and CLEP Subject Exams - seventh rank at 1.5 percent; and (8) ACT's Proficiency Examination Program (PEP) Subject Exams - ninth rank at "0" percent.

A few notations appeared in the "Comments" section of question six. They were as follows: (1) "TABE"; (2) "CMI"; (3) "pre-post assessment within classes, programs"; (4) "ASSET used to test 'value added'"; and (5) "also conduct student questionnaires."

The seventh question asked was the following: "What measures/tests/devices are being used to accomplish follow-up studies on students at your institution?" Administrators' responses to this question appear in Table 4. Topics relating to what measures/tests/devices were being used to accomplish follow-up studies received the following "Yes" percentage responses which permitted them to be ranked from first place to third place: (1) job-placement studies - first rank at 79.7 percent; (2) employer surveys - second rank at 75 percent; and (3) alumni surveys - third rank at 68.8 percent.

Under the space available for "Comments," administrators wrote the following: (1) "conduct a transfer student survey; and (2) "transfer performance data." One administrator wrote "periodic" under "Job placement studies."

Table 4

Number and Percentage of Responses to Follow-Up Studies Options

| Rank | Topic | Yes | | No | | No Response | |
|---|---|---|---|---|---|---|---|
| | | No. | % | No. | % | No. | % |
| 1 | Job placement studies | 51 | 79.7 | 6 | 9.4 | 7 | 10.9 |
| 2 | Employer surveys | 48 | 75 | 9 | 14.1 | 7 | 10.9 |
| 3 | Alumni surveys | 44 | 68.8 | 13 | 20.3 | 7 | 10.9 |

Question eight was as follows: "How are assessment findings used at your institution?" Table 5 contains data compiled from the administrators' "Yes" responses to this question. The topics relating to how assessment findings were used received the following "Yes" percentage responses, thus permitting a ranking of first and third place: (1) to make revisions to existing curricula and to help facilitate strategic planning both ranked first at 68.8 percent; and (2) to assure various publics of quality programming ranked third at 67.2 percent.

The "Comments" section contained the following remarks: (1) "to help facilitate strategic planning in the future"; (2) "accountability plan"; (3) "not as much as should be"; and (4) institutional review."

Table 5

Number and Percentage of Responses to Utilization of Assessment Results Options

| Rank | Topic | Yes |  | No |  | No Response |  |
|---|---|---|---|---|---|---|---|
|  |  | No. | % | No. | % | No. | % |
| 1 | To make revisions to existing curricula | 44 | 68.8 | 12 | 18.7 | 8 | 12.5 |
| 1 | To help facilitate strategic planning | 44 | 68.8 | 12 | 18.7 | 8 | 12.5 |
| 3 | To assure various publics of quality programming | 43 | 67.2 | 11 | 17.2 | 10 | 15.6 |

The final question was the following: "At your institution, who determines what assessment measures are to be used?" Table 6 contains data compiled from the administrators' "Yes" responses to this question. The topics regarding who determines what assessment measures were to be used received the following "Yes" percentage responses which permitted them to be ranked from first through fifth place: (1) college dean of instruction or academic dean - first rank at 62.5 percent; (2) faculty committee - second rank at 57.8 percent; (3) student services personnel - third rank at 54.7 percent; (4) counseling department - fourth rank at 37.5 percent; and (5) college president - fifth rank at 29.7 percent.

Table 6

Number and Percentage of Responses to Origination of Assessment Options

| Rank | Topic | Yes No. | Yes % | No No. | No % | No Response No. | No Response % |
|---|---|---|---|---|---|---|---|
| 1 | College dean of instruction or academic dean | 40 | 62.5 | 11 | 17.2 | 13 | 20.3 |
| 2 | Faculty committee | 37 | 57.8 | 15 | 23.4 | 12 | 18.7 |
| 3 | Student services personnel | 35 | 54.7 | 13 | 20.3 | 16 | 25 |
| 4 | Counseling department | 24 | 37.5 | 20 | 31.2 | 20 | 31.2 |
| 5 | College president | 19 | 29.7 | 23 | 35.9 | 22 | 34.4 |

The "Comments" section for question nine drew numerous responses:

1. Three administrators indicated "a committee that has all of the above."
2. Two administrators indicated "director of institutional research."
3. A third response was "We have a title III grant to determine this."

In addition, the following additional brief comments were noted: (4) "individual faculty departments with leadership from CAD"; (5) "had a committee choose ASSET test for placement and a task force on accountability deal with exit assessment"; (6) "unknown on outcomes assessment at this time"; (7) "college accountability/assessment committee"; (8) "vocational advisory committee as well"; (9) "committee includes Dean's Council"; (10) "departmental users"; and (11) "haven't reached that stage yet."

## Results from Interviews

Eight interviews (see Appendix G for list of questions) with MPTCCA personnel were conducted; they began on May 9, 1991 and ended on May 16, 1991. The number and location of personnel interviewed were as follows: (1) one from the Mid-Plains Area Office; (2) two from MPCC - McDonald-Belton Campus; (3) three from MPCC - Vocational-Technical Division; and (4) two from MCC.

What follows is a summary of information uncovered through the interview process. Interview results gathered from all identified personnel will be summarized according to site in order to simplify and reduce the amount of narrative.

The first interview was conducted with the adult basic education (ABE) director who is located in the Mid-Plains Area Office. The director provided the following information:

1. All incoming students were required by the State to take the Test of Adult Basic Education (TABE).
2. The source of the test was undetermined.
3. Test results were used for a profile sheet, as a point at which to begin discussion and as a placement device.

4. No broad "capstone" measures/projects/tests were being used.
5. Follow-up studies were accomplished with some students through the use of a state-developed "Student Performance Record" instrument.
6. Findings of follow-up studies were being used for state and national reporting.

Two individuals from MPCC - McDonald-Belton, the dean of students and the counselor, were interviewed. Since the information gleaned from these individuals was virtually the same, their individual comments are summarized as one unit. Therefore, the dean of students and counselor offered the following information:

1. Most incoming students were required to take a commercially developed (College Board) English placement test and an institutionally (local) developed math placement test.
2. A small number (twenty-five or fewer) of secretarial students did not take these tests.
3. The tests were administered by the respective departments.
4. Assessment findings were used for initial course placement.
5. The only broad "capstone" test was a licensing exam taken by medical laboratory technician (MLT) students.

6. The MLT exam was developed and administered by an external source.
7. Results of the MLT exam were used to determine whether or not an associate's degree was to be granted.
8. Articulation conferences with one state college and the University were limited kinds of follow-up activities.
9. On occasion, some grade reports of former MPCC - McDonald-Belton students had been received from one state college and the University.

Interviews were conducted with the director of the assessment center, dean of students, and director of placement and recruitment, all located at the MPCC - Vocational-Technical Division site. The director of placement's and dean of student's responses to interview questions one through five were very similar and are therefore summarized as one unit. Through their responses to the aforementioned questions, these individuals noted that nearly all students at MPCC - VTD (1) were required to take the General Aptitude Test Battery (GATB), developed by the U.S. Department of Labor; (2) were counseled and received career planning advice in relation to GATB scores; and (3) were not required to complete any "capstone" assessment measures/projects/tests.

Neither the director of the assessment center nor the VTD dean of students felt knowledgeable enough to respond to questions six and seven which concerned VTD follow-up studies.

Such studies for MPCC - VTD, and to a lesser degree, MPCC - McDonald-Belton are the responsibility of and have been conducted by the director of placement and recruitment, also located on the VTD campus. Therefore, an additional interview (not provided for in the Procedures section of the MARP Proposal) was arranged and completed with this individual.

The director of placement and recruitment noted that follow-up surveys on MPCC students were completed at these time intervals: (1) in May before students graduate; (2) the following September; (3) the following November; and (4) five years after graduation. Instruments used to conduct follow-up studies came from a variety of sources. Once the data has been gathered, analyzed, arranged, and printed, it is used for the following purposes: (1) to determine what the rate of placement is; (2) to facilitate recruitment; (3) to determine how many graduates have moved out of state; (4) to enhance advising; and (5) to report to federal agencies.

The final interviews, involving MCC's president and dean of students, were completed. Since the information gathered from these interviewees was nearly the same, their comments are summarized as a unit and were as follows:

1. ACT scores were being used for placement of incoming, first-time, full-time students. Normally, this would include most of the recent high school graduates who had made application at MCC.
2. No provision was available for screening older, non-traditional students.

3. American College Testing developed the test, and MCC's dean of students and associate dean of students were administering the test.
4. Results were used for course placement in (1) College Foundations (a developmental, study-skills class); (2) English classes; and (3) math classes. Results, if available early enough, were also used in the determination of scholarships.
5. Neither the president nor the dean of students knew of any "capstone" tests/measures/devices.
6. Articulation conferences with one state college and the University were limited kinds of follow-up activities.
7. On occasion, some grade reports of former MCC students had been received from one state college and the University.
8. Student services personnel have conducted follow-up surveys on MCC graduates each year; however, response rates to questionnaires have frequently been limited.
9. Limited follow-up survey work is completed by members of MCC's division of business and mathematics.

## Results of Records Search

As a result of the interview process, a limited number of record-gathering instruments and records were uncovered. A summary of the devices and records follows.

The ABE director in the Mid-Plains Area office provided one copy each of the following record-gathering instruments:

(1) a "Student Information Form," used to gather demographic information; (2) a form used to record TABE test results and demographic data; (3) an ABE "Class Attendance Record" sheet; and (4) a "Student Performance Record" sheet, used to conduct ABE exit or follow-up studies. At the time when the interview was conducted, a number of other forms were being revised but were not yet available.

A copy of MCC's "Follow-Up Questionnaire" was provided by the dean of students. Key areas of the questionnaire included: (1) a request for student demographic data; (2) several questions regarding transfer of course/hours; (3) questions requesting the student's opinion about the strengths and weaknesses of MCC's programs; and (4) a section utilizing a nominal scale whereby the student must rate MCC's services in such areas as career guidance, faculty advising, and instruction. Also, the dean provided a newly created "follow-up card" that was completed by MCC's graduates prior to the May, 1991 graduation. The card contains a request for name, address, social security number, permanent address, plans after graduation, including work or transfer to another institution.

Finally MPCC's director of placement and recruitment provided a copy of MPCC's "1989-90 Graduate Employment Survey," a document of twenty-six pages. This report contained information, reported in descriptive statistics, in several areas, including the following: (1) percentage figures of vocational-technical graduates employed;

(2) percentage figures of vocational-technical graduates continuing their education; (3) percentage figures of academic transfer/pre-professional graduates who are continuing their education in pursuit of a baccalaureate degree; (4) percentage figures of graduates working in Nebraska; and (5) percentage figures of graduates employed in MPTCCA's eighteen county district.

## Summary

A macro view of the status of assessing student academic achievement in public, two-year, NCA accredited technical-community colleges in Nebraska and contiguous states has been provided. Also, a micro view has been established through the examination of related assessment practices in the MPTCCA. A conceptual basis has now been provided that enables the development of a model to assess student academic achievement within MPTCCA institutions.

# Chapter 5

## DISCUSSION, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

### Discussion

The results of this MARP were related to the purpose of the study. The purpose was to conduct an in-depth investigation of the current state of assessment and documentation of student achievement in public, NCA accredited, technical-community colleges in Nebraska and bordering states so that an appropriate assessment model could be developed for the colleges of the MPTCCA. Also, an implementation plan for the model was to be developed. Through a carefully planned process rooted in case study methodology, the research questions were answered. Research questions concerned (1) the availability of effective assessment models; (2) the present status of formalized assessment in the group of institutions identified for the study; (3) the current status of assessment procedures within MPTCCA institutions; (4) and the type of model most appropriate for MPTCCA institutions. The succeeding paragraphs will contain discussion indicating how the results of (1) documentary review; (2) questionnaire methodology; (3) interview procedures; and (4) records examination provided information necessary to answer the research questions.

Documentary review was related to the purpose of the study in several ways. First, the section of the documentary review involving recent books and periodical articles was significant because a brief historical review of assessment practices was presented. From this historical review, among other things, it was established that at least four periods have occurred in the evolution of post-secondary assessment practices. The fourth and most recent period of growing emphasis on assessment practices has been a period during which a number of firm foundations have been laid. These foundations, as established by the regional accreditation associations and by state governmental agencies, will tend to perpetuate a strong emphasis on assessment in institutions of higher learning.

An answer to the first research question, concerning the availability of recent assessment models, was, in part, answered by the fifth and final section of the review of books and periodicals. As noted in Chapter 4 of this study, four different conceptual frameworks and/or models were identified in the review of current literature: (1) a system developed at Northeast Missouri State University (Hutchings and Marchese, 1990:35); (2) a matrix developed by the Southern Association of Colleges and Schools (1989:12); (3) a framework developed by the Middle States Association (Mayhew and Simmons, 1990:377); and (4) an outcomes assessment model at Rankin Technical College (Hammonds, Hockstein, and Hulse, 1990:68).

As a result of a request made in the questionnaire mailed to the seventy-nine institutions identified for this study, several locally developed plans or models were received. These models represented a second important source of documentary information of significant value in answering the first research question.

As detailed in Chapter 4, four plans were received from Colorado community colleges, and these plans contained many similar characteristics which were also characteristics commonly found in assessment plans or models identified in the review of books and periodicals. Also, plans were submitted by administrators from four Kansas community colleges. More variety in the focus of assessment and in assessment methodology was noted in the plans developed by personnel at the Kansas institutions.

Third, documentary evidence was of value because it contained information about the characteristics an effective assessment program should have. As previously mentioned, the writers of the literature identified nine characteristics common to effective assessment programs. Accordingly, an effective program was to have the following: (1) a direct relationship with the institution's role and mission statement; (2) a conceptual framework; (3) strong faculty involvement in its development and implementation; (4) multiple measures of assessment utilized; (5) a feedback loop to provide relevant data to students, faculty, and administration; (6) provisions so that it does not restrict student access and equity; (7) cost effectiveness; (8) simplicity; (9) a plan for evaluation of the assessment process itself.

Finally, as mentioned earlier, the documentary review contained the information necessary to develop the questionnaire. In particular, the question relating to the assessment program being connected to an institution's role and mission was drawn from the review. Likewise, the questions containing the lists of incoming student and outgoing student assessment measures were derived from a careful review of the literature. Also, data about follow-up studies and the uses of assessment findings were of special significance to the questionnaire development process.

The second research question concerned the present status of formalized assessment in NCA accredited, public, two-year, technical community colleges in Nebraska and surrounding states. In order to provide an answer to this question, a questionnaire was developed and administered as described in Chapter 3 of this MARP.

A favorable response rate of 81 percent was obtained from administrators who returned the survey instrument. Patterns of response to the three opening survey questions were as follows:

1. For question one, slightly over one-third of the respondents indicated the presence of an organized, ongoing system to assess academic achievement. Nearly one-fifth of the administrators responded that

they had no organized assessment system, and two-fifths of them indicated that an assessment program was in the early stages of development.

2. With regard to question two, nearly one-third of the respondents checked "Yes" to indicate that they following a plan or model. Nearly two-thirds marked "No," indicating that they did not follow a model. Narrative comments written on the survey contained numerous references to individual types of assessment measures.
3. Question three concerned the issue of whether or not the assessment program was guided by an institutional statement of role and mission. Slightly over half of the administrators responded that their assessment program was connected to role and mission. The "No" response was marked by one-quarter of the respondents, and one-tenth were "uncertain."

Question four involved a query regarding what programs or courses were measured by the assessment procedures. "Academic transfer," as an option, was checked by nearly two-thirds of the respondents. The same response rate occurred for the "Vocational-technical" option, while the "General education" option received a few percentage points less than the academic and vocational options. "Community services," as an option was marked by nearly one-fourth of respondents as an area of assessment activity.

Question five was concerned with the utilization of measures to assess incoming students. Six options were available in this question, and the responses in rank order from the option having strongest response rate to the item having the weakest response rate were as follows: (1) ASSET; (2) locally developed tests; (3) entering student survey; (4) ACT-COMP; (5) College BASE; and (6) MAPS (note MAPS had a 0 percent response rate). Significantly, "Nelson-Denny" was mentioned three times in the narrative comments offered by respondents.

Question six was concerned with the use of measures to assess students prior to graduation. Eight options were available in this question, and the options, when ranked from the one receiving the strongest response rate to the item having the weakest were as follows: (1) student critique of instruction; (2) graduating student survey; (3) exiting student survey; (4) ACT-COMP; (5) juries; (6) College BASE; (7) CLEP General Exams and CLEP Subject Exams; and (8) PEP Subject Exams (note PEP had a 0 percent response rate).

The seventh question involved the nature of the follow-up devices used at institutions receiving the survey. Four-fifths of the respondents indicated job-placement studies were conducted. Three-fourths of the administrators responded that employer surveys were used, and slightly over two-thirds marked alumni surveys favorably. In the section available for comments, a number of administrators wrote, "conduct a transfer student survey."

Question eight was concerned with how assessment findings were used at the respective institutions. All of the options available received very similar percentages. Thus, over two-thirds of administrators noted that assessment findings were used for (1) making revisions to existing curricula; (2) facilitating strategic planning; and (3) assuring various publics of quality programming.

The last question involved a query about what person or group it was that determined the directions taken regarding assessment at responding institutions. Five options were available in this question, and the options, when ranked from the one receiving the strongest response rate to the one receiving the weakest, were as follows: (1) college dean of instruction or academic dean; (2) faculty committee; (3) student services personnel; (4) counseling department; and (5) college president. In the section provided for comments, a number of administrators wrote "a committee that has all of the above."

Since a model was to be a major outcome of this MARP, it was necessary to determine the present status of assessment in MPTCCA institutions. Once this determination was made, the third research question would, for the most part, be answered. As indicated in Chapter 4, eight interviews were completed with MPTCCA personnel identified as most likely to be knowledgeable about present assessment practices.

The following is a discussion of findings from the eight interviews:

1. The ABE director noted the use of the TABE instrument to test all incoming students, various forms used to track a student's progress, and efforts employed to do follow-up studies.
2. From MPCC - McDonald-Belton, the dean of students and counselor stated that most incoming students were assessed through the use of an English placement test and an institutionally created (local) math placement test. These tests were administered by the respective departments. The only "capstone" assessment activity was an MLT licensing exam administered by a local source. Articulation conferences with one state college and the University were a form of follow-up on students. Another form of follow-up was a survey of MPCC - McDonald-Belton students by the director of placement and recruitment on the MPCC - Vocational-Division campus.
3. The director of the assessment center and the dean of students from MPCC - Vocational-Technical Division both reported that (1) the GATB test was administered to all incoming, vocational-technical students; (2) the results of the GATB were used for placement purposes; and (3) there were no "capstone" assessment procedures being used at MPCC-VTD.
4. As previously indicated, an additional interview was arranged with the director of placement and recruitment. This administrator indicated that

follow-up surveys on MPCC students were completed just before the students graduated and at three designated intervals after the students graduated. It was also noted by this individual that more follow-up information was available for vocational graduates than was for academic-transfer students.

5. MCC's president and dean of students were the final interviewees. These administrators reported that (1) ACT scores were being used for placement of incoming, first-time, full-time students in college foundations, math and English classes; (2) no provisions existed for screening older, non-traditional students; (3) no "capstone" measures were being used; and (4) limited forms of student follow-up had been accomplished through articulation conferences and student surveys.

Additional information needed to answer research question three was gleaned through a review of available records uncovered through the interview process. The following documents were secured and examined:

1. Student tracking forms were secured from the ABE director.
2. A copy of MCC's follow-up questionnaire was provided, and sections of it were carefully reviewed.
3. The director of placement and recruitment provided a copy of MPCC's "1989-90 Graduate Employment Survey" which provided percentage figures of VTD graduates

employed, percentages of VTD graduates continuing their education, percentages of academic transfer/preprofessional graduates continuing their education in pursuit of a baccalaureate degree, and demographic information derived from the survey regarding MPCC graduates.

The fourth research question concerned the type of model that would be most effective for MPTCCA institutions. Information and data derived from the four sources examined in this case study were used in the designing of an appropriate model which is located in Appendix H.

## Conclusions

The first conclusion, based upon documentary review, was that a number of models or plans to assess student academic achievement had been developed. Not all of the models or plans had been implemented. However, it appeared that several were in the process of being implemented, and the models at Rankin Technical College and Northeast Missouri State University were fully operational.

A second conclusion was that a majority of the plans contained in the literature and submitted as a result of the questionnaire process had a number of common characteristics. Those characteristics were as follows:

1. There was a direct relationship between the key objectives in the institution's role and mission statement and the assessment plan.

2. The plans were given continuity through a carefully conceived conceptual framework.
3. Faculty had been brought into the development process.
4. Multiple measures of assessment were being used.
5. Most of the models contained some type of feedback loop to provide relevant data to internal and external publics.
6. Some, though not all, had language intended to preserve student access and equity.
7. Cost estimates were included with the plans from the Colorado community colleges with the range being from $25,300 to $115,725.
8. The plans did not appear to be overly complicated.
9. Some, though not all, contained language indicating that the assessment plan itself was to be evaluated.

A third conclusion, derived from the results of the first question on the survey instrument, was that fewer than half of the institutions surveyed had organized, ongoing systems designed to assess student academic achievement. A related secondary conclusion was that about two-fifths of the institutions had assessment systems that were in the early stages of development.

The second question, concerning how many of the responding institutions following a plan or model, received a "Yes" response from about one-third of the administrators. Thus, a fourth conclusion was that a limited number of responding institutions actually had complete, organized plans or models.

Question three concerned the perceived existence of a relationship between the role and mission statement and the assessment program. Since slightly over half of the administrators checked "yes" that their assessment efforts were related to the role and mission statement, a fifth conclusion was that some, but certainly not all, assessment plans were tied to the institution's role and mission statement.

Results derived from question four permitted a sixth conclusion to be drawn. Thus, based on the available data, it was concluded that academic transfer programs and vocational-technical programs were two areas receiving the greatest amount of assessment activity. Not far behind was general education; however, a seventh conclusion was that community services programming was not receiving as much attention.

Question five contained six different options concerned with measures used to assess incoming students. Based on the ranking of the options as noted in the discussion section, an eighth conclusion was that the ASSET test was used by a majority of responding institutions. A secondary conclusion was that other useful entering student assessment devices included locally developed tests and an entering student survey.

Question six was concerned with measures to assess students before graduation. Again, based on the ranking of options as previously noted, a ninth conclusion was that a student critique of instruction, a graduating student survey, and an exiting student survey were assessment devices used with the greatest frequency.

A query regarding the nature of follow-up studies was the topic of question seven. Based on the findings, a tenth conclusion was that job-placement studies received a great deal of utilization. However, a secondary conclusion was that employer surveys and alumni surveys also were quite frequently used.

Utilization of assessment findings was the subject of the eighth question. A review of the data suggested an eleventh conclusion: assessment findings were used about equally for making revisions to existing curricula, facilitating strategic planning, and assuring various publics of quality programming.

The final question involved who determined when and how assessment was to occur. Based on the findings, a twelfth conclusion was that the dean of instruction or academic dean was the individual most likely to determine the direction of assessment. However, a secondary conclusion was that a faculty committee and student services personnel frequently helped to determine the nature and kinds of assessment activities.

A number of conclusions were derived from the personal interviews conducted with the MPTCCA personnel. A thirteenth major conclusion was that limited kinds of assessment activities were taking place within MPTCCA which included the following:

1. The TABE test and other tracking and follow-up activities were being conducted by the ABE director.
2. At MPCC - McDonald-Belton, English and math placement tests were being given by the respective departments to nearly all incoming students. Also, limited amounts of follow-up were being conducted.
3. At MPCC - Vocational Technical Division, the GATB test was being used to assist in-student placement for all incoming students. More follow-up information was available on VTD graduates.
4. At MCC, ACT scores were being used for placement of most incoming, first-time, full-time students in the areas of math, English, and college foundations and study-skills classes. Like MPCC - McDonald-Belton, limited amounts of follow-up were being performed.

In conjunction with the interviews, a limited number of records, record-keeping, and record-gathering devices were uncovered. A final conclusion was that there were a number of useful record-keeping and record-gathering instruments.

## Implications

A number of implications became apparent upon reviewing the conclusions. For example, in a review of the first two conclusions drawn in response to documentary materials, it became apparent that at least some models designed to assess student academic achievement did exist. Several of these models were designed to assess a number of areas including but not limited to (1) the need for students to be placed in developmental classes; and (2) how well students performed in general education, academic transfer, and technical vocational studies. Furthermore, the models that appeared to be more effective contained approximately nine characteristics. These characteristics have been carefully enumerated in the "Discussion" and "Conclusions" sections of this Chapter.

The third conclusion, based on responses to the first survey question, was that fewer than half of the institutions surveyed had organized, ongoing systems designed to assess student academic achievement. A fourth conclusion, derived from responses to the second survey question, was that only about a third of the institutions receiving the questionnaire were following a model. One implication of these responses, viewed together, was that assessment plans and models were in the early stages of development in many of the institutions receiving the questionnaire. The fact that many institutions were in the early stages of developing assessment methodology may account for the range of differences noted in some of the models that were examined in this study.

A fifth conclusion drawn from the results to survey question three was that a majority of administrators did perceive the need to articulate the assessment program with the institution's role and mission. This relationship was also supported in the review of documentary materials. Thus, personnel wishing to construct an assessment model or formulate a plan would do well to view this connection as being crucial.

Based upon responses to the questionnaire, a sixth conclusion was that academic transfer and vocational-technical programs were the focus of a substantial number of assessment efforts, with general education also receiving significant emphasis. That the community services area was not receiving as much assessment attention was a seventh conclusion. Again, these findings were intended to help prioritize key program areas for those interested in commencing assessment procedures.

Patterns of responses to survey question number five also generated an eighth conclusion that the ASSET test was frequently used to assess incoming students. A related secondary conclusion was that locally developed tests and entering student surveys were also used as measures to assess incoming students. An important implication derived from these findings, when coupled with documentary review results, was that ASSET, locally developed tests, and incoming student surveys could all be used. In this way, the concept of "multiple measures" would be facilitated.

Measures used to assess students prior to graduation were the focus of survey question six. A ninth conclusion was that measures receiving the strongest response were student critique of instruction, graduating student survey, and exiting student survey. ACT-COMP also received enough support to place it in fourth rank position. As indicated with the measures used to assess entering students, personnel involved in developing an assessment program would do well to include several of these measures.

A tenth conclusion concerned the topic of follow-up studies. Based on the results of the survey, it was concluded that job-placement studies received much utilization. A secondary, but related conclusion, was that employer surveys and alumni surveys received frequent usage. Several implications were apparent as a result of these conclusions. First, the value of "multiple measures" again would apply here. In addition, a concerted effort to "track" graduates would be important. For institutions that maintained an established data bank of alumni names and addresses, the task of administering these instruments would be somewhat simplified.

Responses to question eight on the survey provided a basis for an eleventh conclusion. It was concluded that assessment findings were utilized about equally for revising exiting curricula, facilitating strategic planning, and assuring internal and external publics that standards were being upheld. An implication here was that assessment results were used for a variety of purposes, including but not limited to, the improvement of instruction and strategic planning.

A twelfth conclusion was drawn as a result of data collected for the final survey question. The conclusion was that the dean of instruction or academic dean most often determined the direction of the assessment measures or program. Also, a faculty committee and student services personnel were frequently involved in assessment decisions. The main implication derived from this conclusion was that the dean of instruction would provide the leadership, but decision making would most likely involve several other groups. Several writers cited in the documentary review also stressed the necessity of faculty involvement in determining the direction of assessment activities.

A thirteenth conclusion was derived from the results of the interviews. As noted, there were a limited number of assessment activities already operational within MPTCCA institutions. An important and related implication was that these activities needed to be incorporated into a larger, more comprehensive model or framework to document student academic achievement.

Based on materials uncovered during the interviews, a final conclusion was that a limited number of record-gathering devices were being used by a variety of personnel within MPTCCA. These too would function well within a larger assessment plan.

## Recommendations for Implementation, Dissemination, and the Improvement of Practice

As noted throughout this study, an organized, ongoing system of documenting student academic achievement had not been developed within MPTCCA institutions. Such a plan was needed so that MPTCCA institutions could comply with accreditation guidelines established by NCA. NCA's position was that compliance with the guidelines would improve institutional effectiveness.

Therefore, a proposed model for MPTCCA (see Appendix H - Figures 8, 9, 10 and 11, pages 114 to 117) was created to improve educational practice. Conclusions and implications established in this chapter were used to frame specific recommendations. The following specific recommendations were utilized in developing the model:

1. The model needs to be developed in relation to key areas identified within the institution's role and mission statement. Based upon the findings of this study, academic transfer/general education programs and vocational-technical programs (and related developmental classes) should begin to be assessed first, followed by community services programs/classes.
2. While the dean of instruction might lead assessment efforts, there should be heavy involvement of faculty and student services personnel.
3. The model needs to have embedded in it a conceptual framework.
4. It needs to provide for assessment of students prior to, during, and after their matriculation. Whenever feasible and within budgetary constraints, multiple assessment measures should be used.

5. Existing assessment measures, devices, and practices, if acceptable, should be incorporated into the model. Also, measures receiving frequent utilization, as determined through the survey process of this study, should be included in the model. These measures should be included only if they are not currently being used in MPTCCA colleges.
6. The model should contain a feedback loop that indicates ways in which assessment results will be used.
7. Provisions to affirm that assessment procedures are not intended to restrict student access and equity should be included.
8. The model should contain provisions for reviewing the effectiveness of the assessment process.
9. Given the preceding requirements, the model still should be as simple and cost effective as possible.

Several additional, closely-related recommendations need to be made with regard to dissemination and implementation of this study in general and the model in particular. They are as follows:

10. It is recommended that the model be disseminated to MPTCCA board members in the fall of 1991. Some of the elements within the recommended assessment model involve MPTCCA board policy matters. It is suggested that applicable policies be developed to allow for implementation.

11. The proposed model is recommended to the special sub-committee of the Student Services Council (see Appendix I "Area President's Implementation Statement") as a working document and should be accepted in this light. Monitoring and evaluation should provide a basis for needed changes within the model.

12. It is also recommended that the planning and budgeting necessary to begin the process of implementing the MPTCCA assessment model be accomplished by June of 1992. Furthermore, a reasonable expectation would be for all of the model's assessment procedures, processes, and measures to be operational by the 1994-95 academic year. A suggested implementation schedule is included in the textual commentary of the model.

Other plans for dissemination include mailing the final abstract of this MARP to all CEO's who responded to the survey. Also, a complete copy of the MARP will be submitted to the ERIC Clearinghouse for Junior and Community Colleges for research reproduction, and a complete copy will be mailed to NCA. It is possible that the results of this study may be disseminated at a future NCA Annual or Regional meeting.

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# APPENDIX A

## COMMISSION STATEMENT ON ASSESSMENT AND STUDENT ACADEMIC ACHIEVEMENT

The Commission affirms that the evaluation/accreditation process offers both a means of providing public assurance of an institution's effectiveness and a stimulus to institutional improvement. The Commission's criteria require an institution to demonstrate the clarity and appropriateness of its purposes as a postsecondary educational institution; to show that it has adequate human, financial, and physical resources effectively organized for the accomplishment of those purposes; to confirm its effectiveness in accomplishing all of its purposes; and to provide assurance that it can continue to be an effective institution. A variety of assessment approaches in its evaluation processes strengthens the institution's ability to document its effectiveness.

The Commission reaffirms its position that assessment is an important element in an institution's overall evaluation processes. The Commission does not prescribe a specific approach to assessment. That determination should be made by the institution in terms of its own purposes, resources, and commitments. Assessment is not an end in itself, but a means of gathering information that can be used in evaluating the institution's ability to accomplish its purposes in a number of areas. An assessment program, to be effective, should provide information that assists the institution in making useful decisions about the improvement of the institution and in developing plans for that improvement. An institution is expected to describe in its self-study the ways that it evaluates its effectiveness and how those results are used to plan for institutional improvement.

The Commission wants to make clear that all institutions are expected to assess the achievement of their students. With this statement we make explicit the Commission's position that student achievement is a critical component in assessing overall institutional effectiveness. Our expectation is that an institution has and is able to describe a program by which it documents student academic achievement.

Approved by the Commission on Institutions of Higher Education
North Central Association of Colleges and Schools
October 27, 1989

# APPENDIX B

# TRANSMITTAL LETTER

MID-PLAINS COMMUNITY COLLEGE
MID-PLAINS
TECHNICAL COMMUNITY
COLLEGE AREA
McCOOK COMMUNITY COLLEGE

March 5, 1991

Dear President:

Mr. Ford Craig, an English Instructor at McCook Community College, is doing a study of current practices regarding assessment of student outcomes in regional community colleges. This study will satisfy one of the requirements for his Doctorate.

I would like to urge you or your designee to take a few minutes to complete the questionnaire so Ford's study will have some validity. You can assist with the success of this study.

We plan on using the findings of this study to assist us in developing a program to assess student outcomes. The program will be used by the colleges in our area.

I want to thank you in advance for your assistance.

Sincerely,

Dr. William G. Hasemeyer

Dr. William G. Hasemeyer
Area President

**MID-PLAINS COMMUNITY COLLEGE**
**Route 4, Box 1, I-80 & Hwy 83**
**North Platte, Nebraska 69101**
**308-532-8740**

**AREA OFFICE**
**416 North Jeffers**
**North Platte, Nebraska 69101**
**308-534-9265**

**McCOOK COMMUNITY COLLEGE**
**1205 East 3rd Street**
**McCook, Nebraska 69001**
**308-345-6303**

# APPENDIX C

# QUESTIONNAIRE

# Assessment of Student Academic Achievement Questionnaire

1. Does your institution have an organized, on-going program to assess and document student academic achievement?

Yes ( )
No ( )
Is in early stages of being developed ( )

Comments:________________________________________

2. Does your institution follow an assessment plan / model?

Yes ( )
No ( )

If you answered "yes," would you please return a photocopy of the model with this questionnaire and indicate who developed the model.

Comments:________________________________________

3. Is the assessment program ultimately guided by an institutional statement of role and mission?

Yes ( )
No ( )
Uncertain ( )

Comments:________________________________________

4. What programs/courses are measured by the assessment procedures?

General education ( )
Academic transfer ( )
Vocational-technical ( )
Community service ( )

Comments:________________________________________

5. What measures/tests/devices are being used to assess incoming students (first time students)? "Yes" is being used, or "No" is not being used.

| | | |
|---|---|---|
| Entering student survey | Yes ( ) | No ( ) |
| Locally developed tests | Yes ( ) | No ( ) |
| ACT - COMP | Yes ( ) | No ( ) |
| College BASE | Yes ( ) | No ( ) |
| ASSET | Yes ( ) | No ( ) |
| MAPS (College Board's Multiple Assessment Program) | Yes ( ) | No ( ) |

Other________________

Comments:________________________________________

6. What measures/tests/devices are being used to assess students prior to graduation? "Yes" is being used, or "No" is not being used.

| | | |
|---|---|---|
| Graduating student survey | Yes ( ) | No ( ) |
| Exiting student survey | Yes ( ) | No ( ) |
| ACT - COMP | Yes ( ) | No ( ) |
| College BASE | Yes ( ) | No ( ) |
| Student critique of instruction | Yes ( ) | No ( ) |
| Juries | Yes ( ) | No ( ) |
| CLEP General Exams | Yes ( ) | No ( ) |
| CLEP Subject Exams | Yes ( ) | No ( ) |
| PEP Subject Exams | Yes ( ) | No ( ) |

Comments:______________________________

7. What measures/tests/devices are being used to accomplish follow-up studies on students at your institution? "Yes" is being used, or "No" is not being used.

| | | |
|---|---|---|
| Job-placement studies | Yes ( ) | No ( ) |
| Alumni surveys | Yes ( ) | No ( ) |
| Employer surveys | Yes ( ) | No ( ) |

Comments:______________________________

8. How are assessment findings used at your institution? "Yes is used for this purpose; "no" is not used for this purpose."

| | | |
|---|---|---|
| To make revisions to existing curricula | Yes ( ) | No ( ) |
| To assure various publics of quality programming | Yes ( ) | No ( ) |
| To help facilitate strategic planning | Yes ( ) | No ( ) |

Comments:______________________________

9. At your institution, who determines what assessment measures are to be used? "Yes" this group or individual makes the determination, or "no this group or individual does not make the determination.

| | | |
|---|---|---|
| Faculty committee | Yes ( ) | No ( ) |
| Student Services personnel | Yes ( ) | No ( ) |
| College Dean of Instruction or Academic Dean | Yes ( ) | No ( ) |
| Counselling department | Yes ( ) | No ( ) |
| College President | Yes ( ) | No ( ) |

Comments:______________________________

# APPENDIX D

# AREA PRESIDENT'S VALIDATION LETTER

MID-PLAINS COMMUNITY COLLEGE
MID-PLAINS
TECHNICAL COMMUNITY
COLLEGE AREA
McCOOK COMMUNITY COLLEGE

MEMO

TO: Ford Craig's Doctoral Advisory Committee Members

FROM: Dr. William G. Hasemeyer, President of Mid-Plains Community College Area

DATE: March 26, 1991

I have reviewed Ford Craig's proposal for "An Investigation of Assessment and Documentation of Student Academic Achievement in Community College and a Proposed Model."

I find the proposal and instrument to be excellent. I believe the findings of this study will be very useful to the colleges in the Mid-Plains Community College Area.

I am very pleased to support this proposal. The findings will be used to implement a program to assess student achievement for the colleges of the Area.

**MID-PLAINS COMMUNITY COLLEGE**
Route 4, Box 1, I-80 & Hwy 83
North Platte, Nebraska 69101
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416 North Jeffers
North Platte, Nebraska 69101
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**McCOOK COMMUNITY COLLEGE**
1205 East 3rd Street
McCook, Nebraska 69001
308-345-6303

# APPENDIX E

# NORTH CENTRAL DIRECTOR'S VALIDATION LETTER

NCA

**North Central Association of Colleges and Schools**

**Commission on Institutions of Higher Education**

159 North Dearborn
Chicago, Illinois 60601
312/263-0456; 800/621-7440
FAX: 312/263-7462

MEMORANDUM -- MARCH 20, 1991

To: Ford Craig's Doctoral Advisory Committee Members

From: Patricia A. Thrash, Executive Director

I am writing to confirm that I have reviewed Ford Craig's proposal for "An Investigation of Assessment and Documentation of Student Academic Achievement in Community Colleges and A Proposed Model" and have discussed it with him.

I find the proposal and the instrument to be satisfactory. Mr. Ford's findings should be most useful. I am pleased to write in support of the proposal.

# APPENDIX F

# INSTITUTIONS SURVEYED

# INSTITUTIONS SURVEYED

## COLORADO

Aims Community College
Greeley, CO

Colorado Mountain College
Glenwood Springs, CO

Colorado Northwestern Community College
Rangely, CO

Community College of Aurora
Aurora, CO

Community College of Denver
Denver, CO

Front Range Community College
Westminster, CO

Lamar Community College
Lamar, CO

Morgan Community College
Fort Morgan, CO

Northeastern Junior College
Sterling, CO

Otero Junior College
LaJunta, CO

Pikes Peak Community College
Colorado Springs, CO

Pueblo Community College
Pueblo, CO

Red Rocks Community College
Lakewood, Co

Trinidad State Junior College
Trinidad, CO

## IOWA

Des Moines Area Community College
Ankeny, IA

Eastern Iowa Community College District
Davenport, IA

Hawkeye Institute of Technology
Waterloo, IA

Indian Hills Community College
Ottumwa, IA

Iowa Central Community College
Fort Dodge, IA

Iowa Lakes Community College
Estherville, IA

Iowa Valley Community College District
Marshalltown, IA

Iowa Valley Community College District - Ellsworth Community College
Iowa Falls, IA

Iowa Valley Community College District - Marshalltown Community College
Marshalltown, IA

Iowa Western Community College
Council Bluffs, IA

## IOWA (contd.)

Kirkwood Community College
Cedar Rapids, IA

North Iowa Area Community College
Mason City, IA

Northeast Iowa Community College
Calmar, IA

Northwest Iowa Technical College
Sheldon, IA

Southeastern Community College
West Burlington, IA

Southwestern Community College
Creston, IA

Western Iowa Tech Community College
Sioux City, IA

## KANSAS

Allen County Community College
Iola, KS

Barton County Community College
Great Bend, KS

Butler County Community College
El Dorado, KS

Cloud County Community College
Concordia, KS

Coffeyville Community College
Coffeyville, KS

## KANSAS (contd.)

Colby Community College
Colby, KS

Cowley County Community College
Arkansas City, KS

Dodge City Community College
Dodge City, KS

Fort Scott Community College
Fort Scott, KS

Garden City Community College
Garden City, KS

Haskell Indian Junior College
Lawrence, KS

Highland Community College
Highland, KS

Hutchinson Community College
Hutchinson, KS

Independence Community College
Independence, KS

Johnson County Community College
Overland Park, KS

Kansas City Kansas Community College
Kansas City, KS

Kansas College of Technology
Salina, KS

Labette Community College
Parsons, KS

KANSAS (contd.)

Neosho County Community
College
Chanute, KS

Pratt Community College
Pratt, KS

Seward County Community
College
Liberal, KS

MISSOURI

Crowder College
Neosho, MO

East Central College
Union, MO

Jefferson College
Hillsboro, MO

Metropolitan Community
College District
Kansas City, MO

Mineral Area College
Flat River, MO

Moberly Area Junior
College
Moberly, MO

North Central Missouri
College
Trenton, MO

Saint Louis Community
College
St. Louis, MO

State Fair Community College
Sedalia, MO

Three Rivers Community
College
Poplar Bluff, MO

NEBRASKA

Central Community College
Grand Island, NE

Metropolitan Community
College
Omaha, NE

Mid-Plains Technical
Community College
North Platte, NE

Nebraska Indian Community
College
Winnebago, NE

Northeast Community
College
Norfolk, NE

Southeast Community
College Area
Lincoln, NE

Western Nebraska
Community College
Scottsbluff, NE

SOUTH DAKOTA

Oglala Lakota College
Kyle, SD

Southeast Vo-Tech
Institute
Sioux Falls, SD

Western Dakota Vocational
Technical Institute
Rapid City, SD

WYOMING

Casper College
Casper, WY

Central Wyoming College
Riverton, WY

Eastern Wyoming College
Torrington, WY

Laramie County Community
College
Cheyenne, WY

Northwest College
Powell, WY

Sheridan College
Sheridan, WY

Western Wyoming College
Rock Springs, WY

# APPENDIX G

# INTERVIEW QUESTIONS

# Interview Questions

1. What measures/tests/devices are being used to assess incoming students (first time students)?
2. If there are assessment procedures for in-coming students, do these procedures apply to all students or to a sub-category of students? Please identify the subcategory or categories.
3. If there are assessment procedures for in-coming students, who developed them and who is responsible for general administration of the procedure? How are assessment findings used?
4. Do you know of any broad, "capstone" measures/projects/tests used to assess students prior to graduation? If so, who undergoes the assessment?
5. If there are "capstone" assessment procedures, who developed them and who is responsible for their administration? How are the findings used?
6. What measures/tests/devices are being used to accomplish follow-up studies on students at your institution? Who is targeted for follow-up studies?
7. If there are follow-up studies, who developed them and who is responsible for their administration? How are the findings used?

## APPENDIX H

## MPTCCA ASSESSMENT MODEL

# A PROPOSED ASSESSMENT MODEL

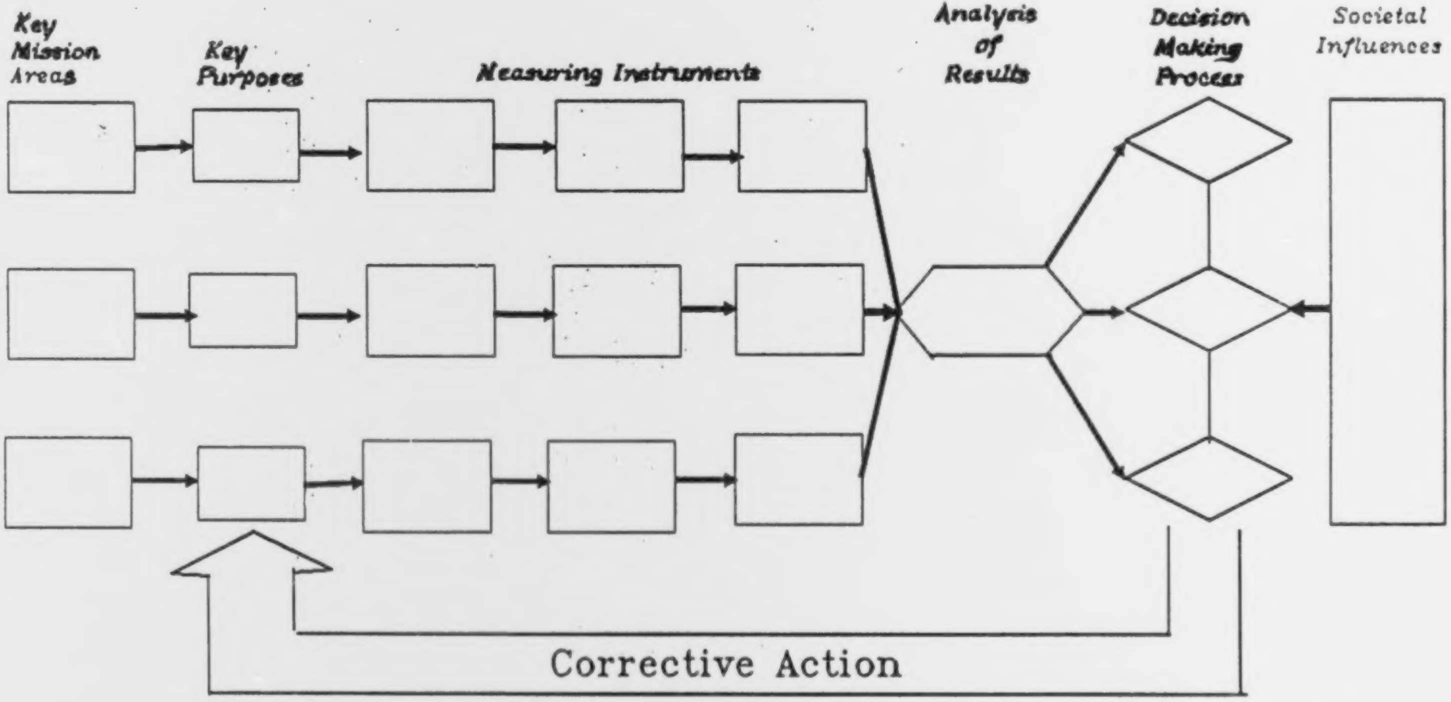
designed for

MPTCCA

by

Ford M. Craig

# MPTCCA Assessment Model



* *Detailed sections of the model appear on succeeding pages*

Figure 8

MPTCCA Assessment Model

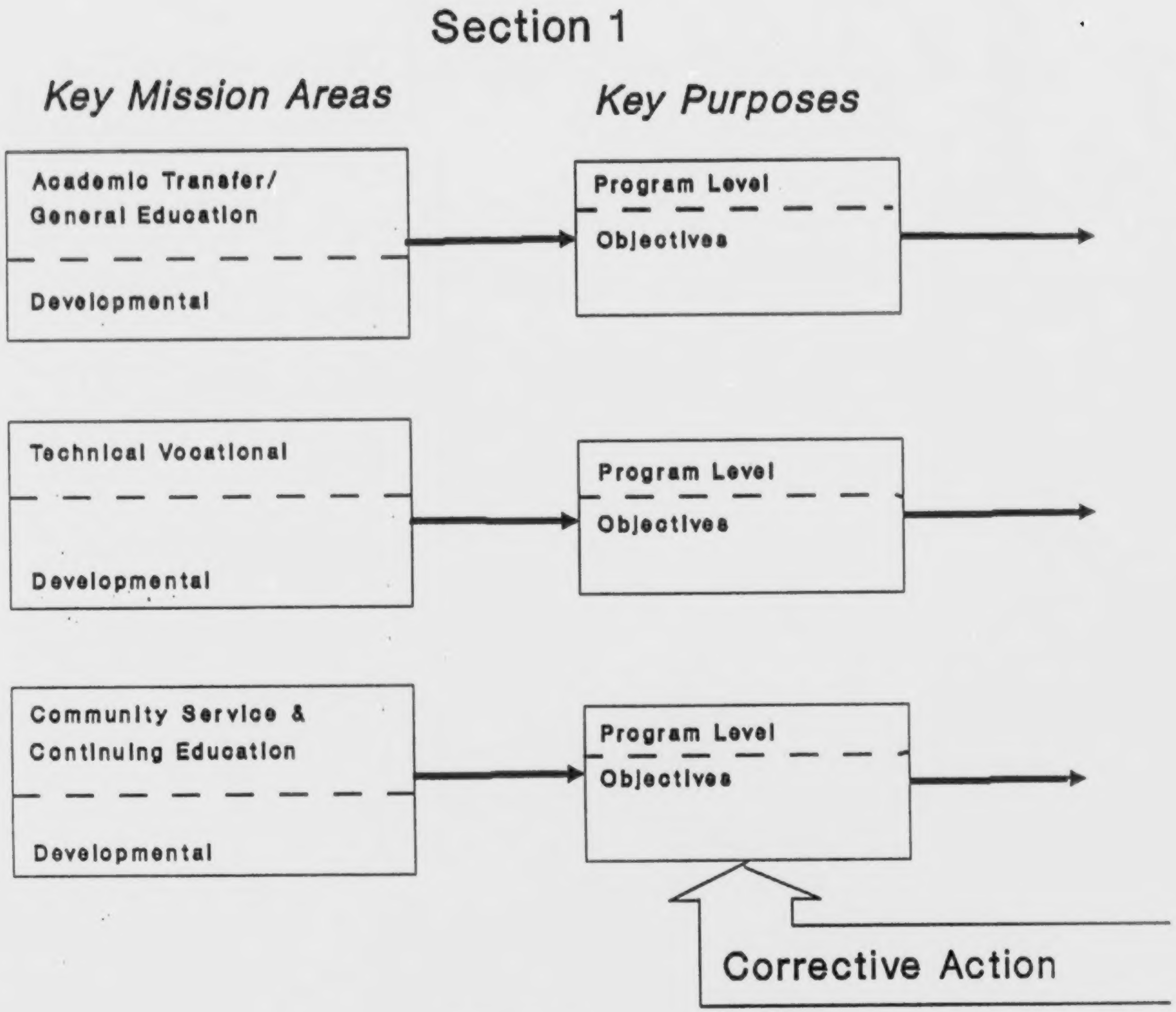
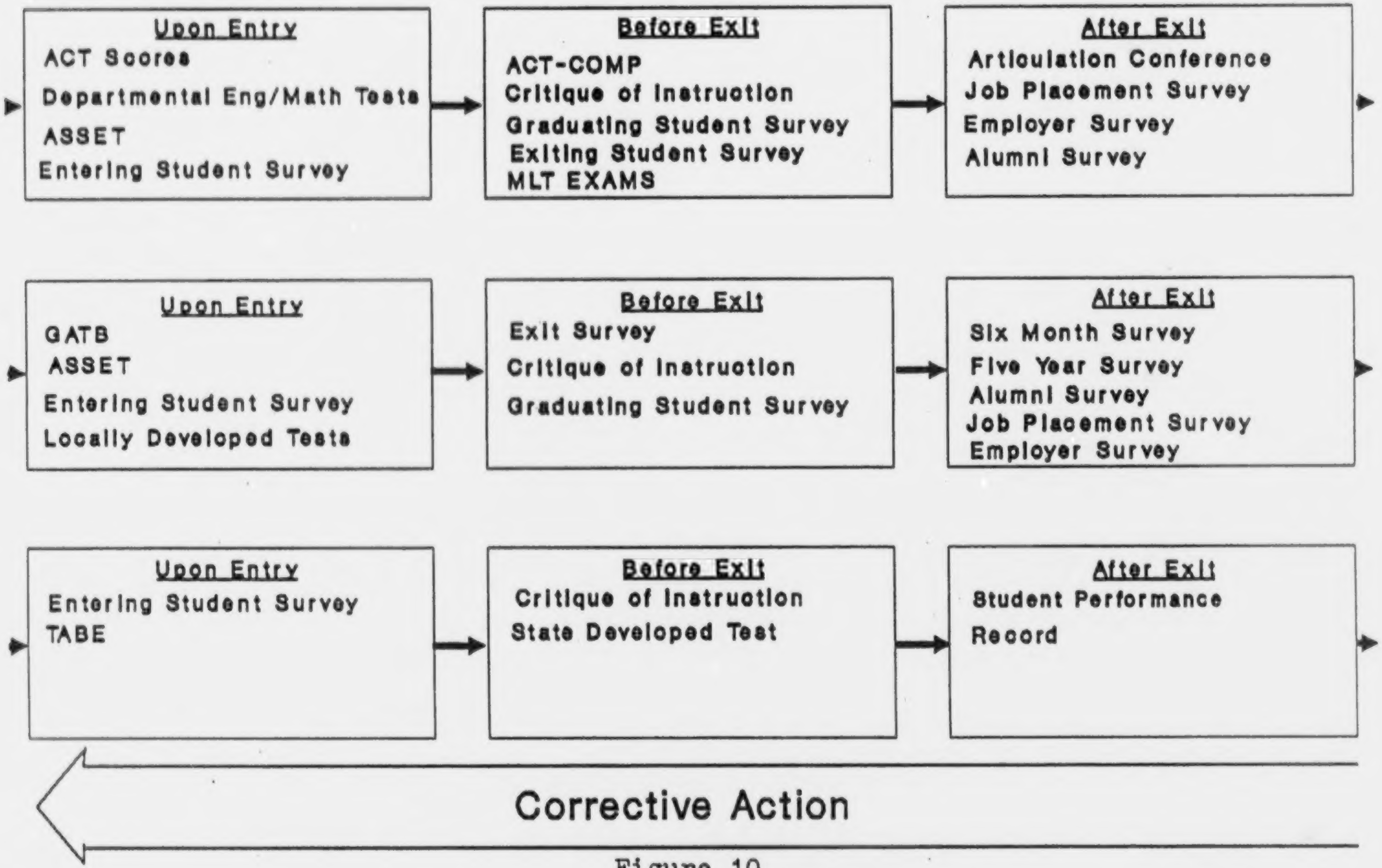


Figure 9
MPTCCA Assessment Model - Section 1

# Section 2

## *Measuring Instruments*



**Upon Entry**
ACT Scores
Departmental Eng/Math Tests
ASSET
Entering Student Survey

**Before Exit**
ACT-COMP
Critique of Instruction
Graduating Student Survey
Exiting Student Survey
MLT EXAMS

**After Exit**
Articulation Conference
Job Placement Survey
Employer Survey
Alumni Survey

**Upon Entry**
GATB
ASSET
Entering Student Survey
Locally Developed Tests

**Before Exit**
Exit Survey
Critique of Instruction
Graduating Student Survey

**After Exit**
Six Month Survey
Five Year Survey
Alumni Survey
Job Placement Survey
Employer Survey

**Upon Entry**
Entering Student Survey
TABE

**Before Exit**
Critique of Instruction
State Developed Test

**After Exit**
Student Performance
Record

Corrective Action

Figure 10

MPTCCA Assessment Model - Section 2

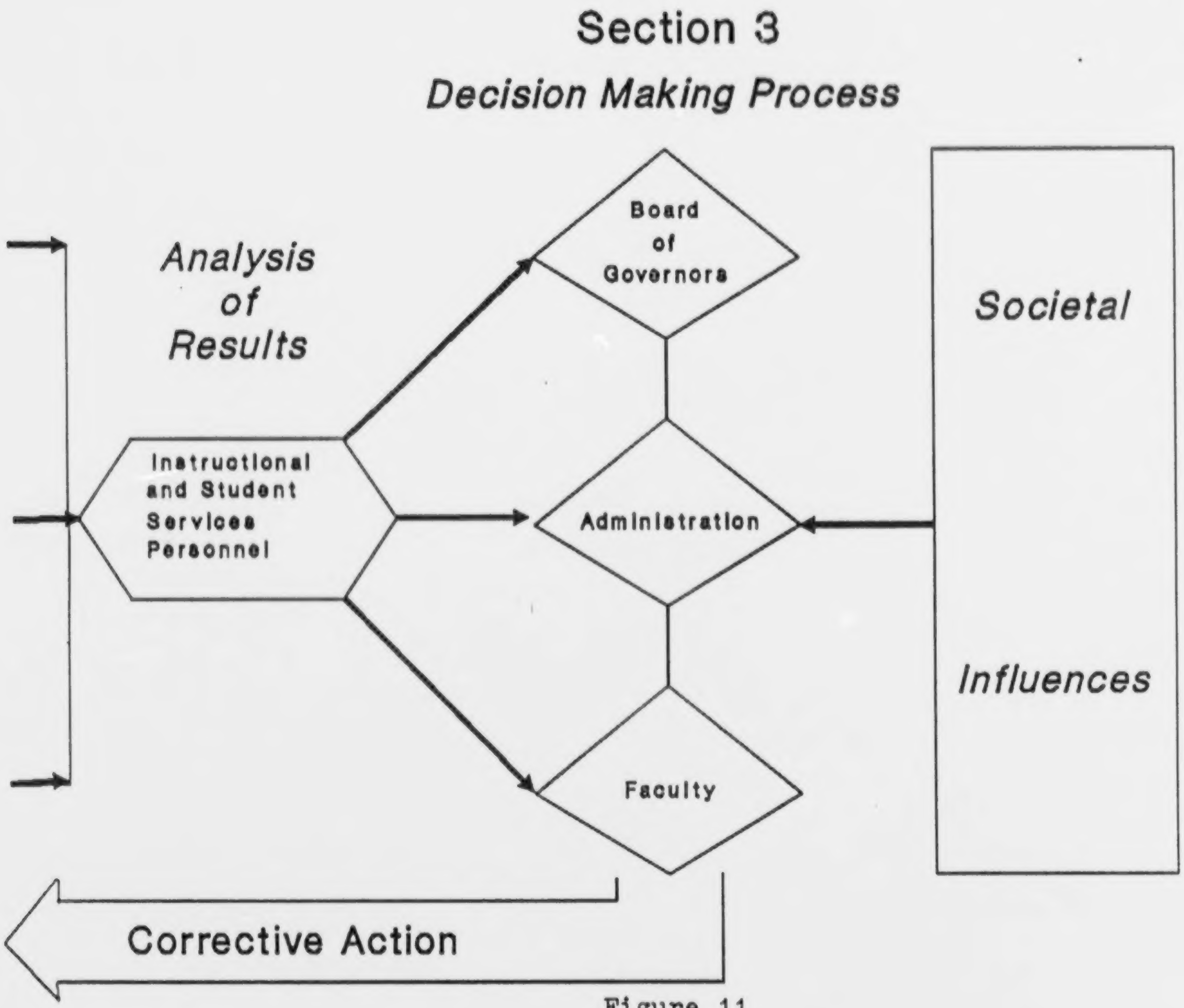


Figure 11

MPTCCA Assessment Model - Section 3

# Mid-Plains Technical Community College Area
# A Model Designed to Assess Student Achievement

## PURPOSE OF THE MODEL

The purpose of the MPTCCA model is to (1) assess student academic achievement so that instructional effectiveness can be demonstrated; and, (2) provide information so that instructional programs can be improved.

## COMPONENTS OF THE MODEL AND RELATED SUGGESTIONS

### Key Mission Areas

Based upon the findings of the study (Craig, 1991b) from which this model was developed, the most effective assessment plans are those that are ultimately guided by a **statement of institutional role and mission**. MPTCCA's statement of role and mission contains a number of mission objectives; however, the "key areas" identified in this model are the ones most directly related to student academic achievement. Based upon the results of this study, academic transfer/general education programs and vocational-technical programs (and related developmental classes) should begin to be assessed first, followed by community services programs/classes.

In order to facilitate implementation of the developmental education aspect of this model, it is suggested that the Board of Governors add one objective to the MPTCCA role and mission statement: "To provide education that strengthens the academic skills of students, so that they can effectively function at the college-entry level." This need for this addition is supported by the recent passage of LB 663 (1991) in the Nebraska legislature. The law provides direction to the Nebraska Postsecondary Coordinating Commission for the development of guidelines which place the emphasis at the technical community college level for postsecondary education remedial programs.

### Program Level Objectives

In order to facilitate assessment at the program level and below, program level objectives need to be written for each of the "key areas" contained within the mission statement. Not only will program level objectives be essential for assessment purposes, but also they will provide a needed bridge between the broad areas of role and mission and the somewhat narrower objectives contained within an instructor's individual class syllabus.

Examples of **program level objectives** follow:

1. For the Academic Transfer/General Education mission objective:
    a. Students will be able to demonstrate effective written and oral communication.
    b. Students will demonstrate the ability to apply mathematical skills to the solution of problems.

2. For the (proposed) Developmental Education mission objective:
   a. Students will demonstrate reading, writing, and math skills needed to function at the college entry-level.
3. For the Technical-Vocational Education mission objective.
   a. Students will be able to perform tasks related to particular jobs or groups of jobs.
   b. Students will demonstrate an understanding of personal characteristics that contribute to effective job performance.
4. For the Community Services and Continuing Education mission objective:
   a. Students will have their intellectual, cultural, social, or personal development enhanced.

**Measuring Instruments**

For evaluation processes to be more effective, students need to be assessed prior to, during, and after their matriculation. Whenever economically feasible and within time constraints, multiple assessment measures are desirable.

In the MPTCCA model, existing assessment measures, devices, and practices have been incorporated. Also, measures receiving frequent utilization, as determined through the survey process conducted in conjunction with this study, have been included in the model.

A further elaboration of measuring devices should be helpful. Entry level assessment measures as related to mission area (either currently operational or recommended) are as follows:

1. For the Academic Transfer/General Education mission objective:
    a. MCC is presently using ACT scores as placement indicators for math and English classes.
    b. MPCC - McDonald Belton is presently using a College Board exam for English placement and a departmentally created math placement test.
    c. A survey for entering students that can be used in all MPTCCA institutions is recommended.
    d. Adoption of ACT's ASSET test (ASSET is a test name and not an acronym) is recommended in order to enhance present placement practices.
2. For the Technical-Vocational mission objective:
    a. MPCC - VTD is presently using the General Apititude Test Battery (GATB) test.
    b. A survey for entering students that can be used in all MPTCCA institutions is recommended.
    c. Adoption of ACT's ASSET test is recommended in order to enhance present placement practices.

d. If ASSET cannot be adopted, a recommendation is that a locally developed test or tests be created to enhance the placement process.

3. For the Community Service and Continuing Education mission objective:

   a. The Test of Adult Basic Education (TABE) is presently being used for Adult Basic Education students.

   b. A survey for entering students that can be used in all MPTCCA institutions is recommended.

Exit level measuring devices (either currently operational or recommended) are as follows:

1. For the Academic Transfer/General Education mission objective:

   a. A graduating or exiting student survey is presently used at MPCC but not at MCC. A uniform exiting student survey that can be used in all MPTCCA institutions is recommended.

   b. A uniform graduating student critique of instruction that can be used in all MPTCCA institutions is recommended.

   c. The Medical Laboratory Technician exam is utilized on the MPCC - McDonald-Belton campus.

   d. The ACT College Outcomes Measures Project (COMP) test or possibly the ACT Colliegiate Assessment of Academic Proficiency (CAAP) test is recommended for use at MPCC - McDonald-Belton and MCC to measure exiting students' abilities.

2. For the Technical/Vocational mission objective:
    a. An exiting student survey is currently in use at MPCC - VTD. However, a uniform exiting student survey that can be used in all MPTCCA institutions is recommended.
    b. A uniform graduating student critique of instruction that can be used in all MPTCCA institutions is recommended.
    c. A suggestion is that "capstone" projects be given consideration.
3. For the Community Service and Continuing Education mission objective:
    a. A student critique of instruction for ABE students is recommended.
    b. It is likely that some type of exit exam for ABE students will be forthcoming from the state level.
    c. A uniform student critique of instruction for all MPTCCA, community service class offerings, other than ABE, is recommended.

After exit or graduation measuring devices (either currently operational or recommended) are as follows:

1. For the Academic Transfer/General Education mission objective:
    a. Articulation conferences with Kearney State College and the University of Nebraska are currently a limited form of assessment.
    b. Some follow-up assessment is accomplished presently at both campus locations of MPCC in North Platte. The follow-up includes a job placement survey and an employment survey. If these instruments are determined to be satisfactory by the committee charged with implementing this model, they could be used uniformly throughout all MPTCCA institutions.
    c. The use of alumni surveys (including transfer students) is an additional recommendation for all MPTCCA institutions. (A database of alumni names will need to be assembled for MPCC institutions.) MCC presently has a database containing over 4,000 alumni names and addresses.
2. For the Technical-Vocational mission option:
    a. A six month (Placement Survey) is currently being administered.
    b. A five year (Employment Survey) is currently being used.

c. See (b.) above, "after exit or graduation devices for Academic Transfer/General Education."

d. See (c) above, "after exit or graduation devices for Academic Transfer/General Education."

3. For the Community Service and Continuing Education mission option:

a. For the ABE students, the "Student Performance Record" is currently being used.

## Analysis of Results

As of the time of this writing, it is difficult to determine precisely who will be responsible for analysis of the results. Under present campus structures, the analysis would most likely be conducted by both instructional and student services personnel. Having completed the analysis, instructional and student services personnel would then report results, at least once annually, to the special subcommittee of the Student Services Council charged with implementing this assessment model. Members of the subcommittee would then categorize and classify the results for submission to other audiences.

Two points related to this discussion of analysis need to be emphasized. First, assessment is **a means and not an end**. Those charged with assessment can become so busy with the process that **careful interpretation of the product (results) gets neglected**.

Secondly, while instructional and student services personnel on each campus will most likely be responsible for administering assessment devices, it would be much more effective and perhaps more efficient for assessment data to be reported to and analyzed by a **director of institutional research**. In a recent Nova Practicum (Craig, 1991a:30), a recommendation to the MPTCCA Board of Governors was that consideration be given to "establishing and funding a Director of Institutional Research position in the MPTCCA Area Office." A similar recommendation appeared in the spring 1991 self-study report which was prepared prior to a visit by NCA consultant-evaluators.

**Decision Making Processes**

When the data have been analyzed and organized by the special sub-committee or by a director of institutional research, appropriate audiences to review results would include the MPTCCA Board of Governors, members of the administration, and faculty in the various departments. With regard to decision making by these groups, the primary use of data collected through assessment should be to examine what revisions should be made to improve existing curricula. Other important uses would be to facilitate the more complex process of strategic planning (a governing board and administrative use) and to assure various internal and external publics of program quality (governing board, administrative, and faculty use).

### Feedback Loop (Corrective Action)

Improvement of educational practice is a major goal of the assessment process. When assessment results indicate a weakness in accomplishing a given program level objective, instructional and administrative members of a department or program may eliminate or reduce the weakness by strengthening a class or perhaps a number of classes. Thus, assessment procedures provide a continual program and course review process.

## THE MPTCCA MODEL: OTHER GUIDELINES

### Personnel Involved in Planning and Implementation

A special sub-committee of the Student Services Council has been charged with making the decisions necessary to begin implementation of the model. As the implementation process begins, it is recommended that the following groups be heavily involved: (1) the faculty; (2) a dean of instruction and/or the vice-presidents of instruction; and (3) student services administrators.

### Guidelines to Protect Student Equity and Access

Affirmative action guidelines are of consequence for assessment programs. The assessment plan (1988:2) developed by the Community College of Aurora, Colorado contains the following provisions:

> Data will be gathered and reported on identified subsets, including educational goals, major, credit hours earned, part-time/full-time status, ethnicity, gender, age, and handicapped status. This is in accord with affirmative action guidelines that minority student data can be disaggregated and reported.

Assessment Program Evaluation

The MPTCCA assessment model, as it is implemented, needs to be monitored and reviewed on an annual basis. Patton and Van Kollenburg (1991:39) suggest that the review should determine the following: (1) whether the "conceptual framework is sound"; (2) whether "all of the components are appropriate to the institution's mission and purposes"; (3) whether "the data gathered are being used for the intended purposes"; and (4) most importantly, whether "the improvement of educational programs and the enhancement of student academic achievement--is being attained."

**IMPLEMENTATION**

In the NCA Assessment Workbook (1991:32), the Commission's position on implementation of assessment programs in NCA accredited postsecondary institutions is stated:

> All evaluation teams, focused or comprehensive, will make recommendations about appropriate Commission monitoring. Some institutions might require no further review; some might be required to file reports; some might require a focused visit. In determining the appropriateness of the monitoring, teams will weigh the impact of the passage of time; that is, institutions visited in 1995 should be in the implementation stage or very close to it.

With this Commission statement to be used as a guideline, the following implementation schedule is recommended to the special sub-committee of the Student Services Council:

1. During the fall of the 1991 academic year, the MARP and the model is to be disseminated to MPTCCA board members and appropriate administrators. It is

suggested that board policy changes be made so that the developmental education component of the model can be implemented.

Also, during the fall of 1991, the sub-committee of the Student Services Council should meet and begin the process of reviewing the MARP and the model. It is recommended that this sub-committee establish a reasonable time-line for implementation of the model (suggested checkpoints appear in number two on the following page).

2. Spring 1992

   - Instructional staff begins writing program level objectives related to key mission areas
   - Sub-committee develops (with input) and submits budget to the Board of Governors so that all assessment procedures for entering students can begin in the fall of 1992
   - Sub-committee reviews and evaluates progress on implementation of the model

   Fall 1992

   - Institutions have in place all assessment instruments for entering students
   - Sub-committee begins an examination of devices used to measure students prior to exiting or graduation

Spring 1993

- Institutions continue assessing entering students
- Sub-committee determines (with input) assessment devices for exiting or graduating students
- Sub-committee develops and submits a budget to the Board of Governors so that all assessment procedures are operational for students entering in the fall of 1993 and for those exiting or graduating in the spring of 1994
- Sub-committee reviews and evaluates progress on implementation of the model Any needed adjustments are made

Fall 1994

- Institutions continue assessment of entering students
- Sub-committee begins an examination of devices used to assess students after graduation

Spring 1994

- Institutions continue assessing entering students
- Sub-committee (with input) determines devices used to assess students after graduation

- Sub-committee submits budget to Board of Governors so that all assessment procedures will be operational by spring, 1995
- Institutions begin to assess students prior to graduation
- Sub-committee reviews and evaluates progress made toward implementation of the model and makes needed adjustments

Fall 1994

- Model is completely implemented for the 1994-95 academic year
- Evaluation and revision of the model continues

A gradual but steady implementation is envisioned so that human resources and monies are not strained as a result of trying to accomplish too much too soon. Finally, it is a firm belief that implementation of this proposed model will improve the process of education for students attending MPTCCA institutions.

## REFERENCES

Accountability Program Plan. Aurora, Colorado: Community College of Aurora, 1988.

Assessment Workbook. Chicago: Commission on Institutions of Higher Education of the North Central Association, 1991.

Craig, Ford M. "An Assessment of How to Organize Effectively the Function of Institutional Research in the Mid-Plains Technical Community College Area." A Practicum Report, Nova University, 1991a.

Craig, Ford M. "An Investigation of Assessment and Documentation of Student Academic Achievement in Community Colleges and a Proposed Model." Ed D. Major Applied Research Project, Nova University, 1991b.

Nebraska. "Legislative Bill 663." Lincoln, Nebraska: Education Committee of the Nebraska Legislature, 1991.

# APPENDIX I

# AREA PRESIDENT'S IMPLEMENTATION STATEMENT

MID-PLAINS COMMUNITY COLLEGE
MID-PLAINS
TECHNICAL COMMUNITY
COLLEGE AREA
McCOOK COMMUNITY COLLEGE

TO: Ford Craig's Doctoral Advisory Committee Members

DATE: March 5, 1991

This communication is to indicate that upon completion of Ford's Major Applied Research Project, instructional and administrative staff will begin the process of implementation. A special sub-committee of the Student Services Council will be formed and will review his study and the proposed model. Having reviewed the model and the recommendations, this group will begin the decision-making processes necessary for implementation.

Sincerely,

Dr. William G. Hasemeyer

Dr. William G. Hasemeyer
Area President

**MID-PLAINS COMMUNITY COLLEGE**
**Route 4, Box 1, I-80 & Hwy 83**
**North Platte, Nebraska 69101**
**308-532-8740**

**AREA OFFICE**
**416 North Jeffers**
**North Platte, Nebraska 69101**
**308-534-9265**

**McCOOK COMMUNITY COLLEGE**
**1205 East 3rd Street**
**McCook, Nebraska 69001**
**308-345-6303**

Ford M. Craig
1206 West Sixth Street
McCook, Nebraska 69001

Ford Craig was born in Omaha, Nebraska on November 3, 1948. His early schooling was completed in rural schools near the community of Leigh, Nebraska.

After graduating from Leigh High School in 1967, he attended Wayne State College in Wayne, Nebraska. In 1970, he graduated from Wayne State College with a B.A. in Education, having completed the requirements for an English major.

Before commencing education at the doctoral level, he completed a Master of Science in Education degree (emphasis in English) in 1974 and an Educational Specialist degree (emphasis in Administration) in 1988 at Kearney State College, Kearney, Nebraska. In 1989, he was admitted to Nova University in Ft. Lauderdale, Florida and began his doctoral studies in January of 1990. He is currently a candidate for a Doctor of Education degree, with a specialization in Higher Education.

His professional experiences include the following: (1) one year as an English teacher at Palmer Public Schools, Palmer, Nebraska; (2) three years as an English teacher at St. Paul Public Schools, St. Paul, Nebraska; (3) four years as an English teacher at North Platte High School, North Platte, Nebraska; and (4) thirteen years as an instructor at McCook Community College, McCook, Nebraska. At the time of this writing, his employment continues with McCook Community College as an English and Education instructor.

As a student in the Programs for Higher Education at Nova University, I do give permission to Nova University to distribute copies of this Major Applied Research Project on request from interested parties. It is my understanding that Nova University will not charge for this dissemination other than to cover the costs of duplicating, handling, and mailing of the materials.

21 July 1991
(date)

Ford M. Craig
Ford M. Craig

I certify that I have read and am willing to sponsor this Major Applied Research Project submitted by Ford M. Craig. In my opinion it conforms to acceptable standards and is fully adequate in scope and quality as a Major Applied Research Project for the degree of Doctor of Education at Nova University.

25 July 1991
(date)

BRHerrscher
Barton R. Herrscher, Ed.D.
MARP Advisor

I certify that I have read this Major Research Project and in my opinion it conforms to acceptable standards for a Major Applied Research Project for the degree of Doctor of Education at Nova University.

25 July 1991
(date)

Charles W. Collins, Ed.D.
Local Committee Member

This Major Applied Research Project was submitted to the Central Staff of the Programs for Higher Education of Nova University and is acceptable as partial fulfillment of the requirements for the degree of Doctor of Education.

July 25, 1991
(date)

Peter K. Mills, Ed.D.
Central Staff Committee Member

ERIC Clearinghouse for
Junior Colleges SEP 06 1991